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ORIGINAL ARTICLES.

SOME DISPUTED POINTS IN THE CORRECTION OF REFRACTION ERRORS.

Read in the Section of Ophthalmology at the Forty-first Annual Meeting of the American Medical Association, at Nashville, Tenn., May, 1890.

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In the entire range of ophthalmology there is probably no question as important as that of how to deal with errors of refraction. The sum total of discomfort, disease and impaired vision fairly ascribable to ametropia, is unapproachable by that due to any of the grave disorders to which the eye is subject; and glasses are being prescribed with ever-increasing frequency and by a rapidly widening circle of medical men. Yet it is very unfortunate to note the wide divergence in the views of men who ought to be authorities in such matters; and the acrimonious criticism with which some of them assail the work of others, attacking them even before the laity with a vigor which ill accords with professional, or even common courtesy, and can be justified only by scientific demonstrations, as yet lacking, that the treatment thus condemned is unwise and harmful.

As there are many whose views in this matter are not very definite, I have felt that in placing on record the conclusions that I have reached in ten years of close and conscientious study, I may perhaps aid some in reaching clearer views and more satisfactory results. Without claiming any originality, then, but apologizing to those who may be bored by this retravelling of much-trodden paths, I will touch upon some of the points in dispute.

First, as to the frequency of ametropia. There are probably few now remaining who will uphold the old view that the majority of people are emmetropic. The investigations of the eyes of infants and school-children have proven beyond any reasonable doubt that the young human eye is almost invariably hypermetropic, that astigmatism is extremely common, although not always easily uncovered, and that myopia—the bugbear of our German cousins especially—is almost invariably developed during the school age.[1] But from this point wide divergence begins. The rule that has been proven for children, is quite generally held to be inapplicable to adults. It is considered entirely natural that the immature child should present the undeveloped type of eye; but also that he should outgrow it later, as he does many other childish things. The general existence of emmetropia in adult life is claimed upon this *a priori* ground, and has really been but rarely questioned; yet it needs only a rational questioning of the view to show that it is baseless. Hardly one cornea in twenty is free from measurable astigmatism, as the modern handy ophthalmometers clearly show (Javal, Nordenson, Schiotz, Burnett, *et. al*). So, too, as to axial ametropia, the few investigations made among adults, falling far short of the whole truth as they generally do, still show that not one-half could be looked on as emmetropic. Incomplete as the demonstration is, it is quite enough to throw the burden of proof upon those who would maintain the *a priori* view. Thus, it has been demonstrated by Seggel that among the common soldiers in Munich, 40 per cent. of the 3,052 eyes studied had *manifest* hypermetropia, and only 46 per cent. appeared emmetropic; yet these were healthy young adults from among whom all notably abnormal had been excluded by the enlistment examination. Stricter study would have greatly reduced this group of apparent emmetropes, just as Roosa[2] found among 20 eyes carefully selected as free from manifest hypermetropia only 6 which were actually emmetropic under atropia—the rest revealing hypermetropia of .65 to 1.5 D. In a study of the eyes of medical students, I found with the test glasses, among 142 eyes, 51 apparently emmetropic, 54 myopic, and only 37 with manifest hypermetropia; yet the ophthalmoscope and other methods proved that full 92 were hypermetropic, only 19 myopic, and at most 31 emmetropic.[3] Of the 51 eyes which rejected convex glasses and seemed emmetropic, only 16 appeared so by other tests; and the use of a mydriatic would have reduced even this list nearly to the vanishing point. Only

[1] Randall, "The Refraction of the Human Eye," Amer. Jour. Med. Sciences, July, 1885.

[2] Trans. Am. Oph. Society, 1878.

[3] Randall, "Eyes of Medical Students," Trans. Pennsylvania State Med. Soc. 1885.

32, or 18.8 per cent. of the total 180 eyes examined could be regarded as free from ametropia, manifest even to the incomplete investigation.

So, too, the refraction work in our clinics gives a showing of the ametropia that can be robbed of little of its force by the claim that eye patients do not fairly represent the general population. One-third of the work done at the Wills Eye Hospital in Philadelphia among its 10,000 annual patients, is the correction of refraction errors; and the proportion is nearly one-half in the Eye Clinic of the University of Pennsylvania. Let it be shown by competent investigation that any large group of adults presents a considerable proportion of emmetropia, and then only will such facts as these be at all in need of confirmation. If we look at any group of people whose refraction has been measured in order to seek the relation of refraction error to other disease—be it chorea, epilepsy, glaucoma or anything else—we find results that vary only with the method and care of the examiner. Dr. de Schweinitz found, as did Stevens, a high proportion of ametropia among choreic children, but not more than Risley found in 1,200 of the general school population of Philadelphia. In the latter investigation the emmetropes remained practically unvarying in the ages from 6 to 21 years. The study of adults reaches parallel results.

Those who would uphold the assumption of the prevalence of emmetropia, must fall back upon a series of unproven and really untenable explanations of why the facts conflict with their theory. They must exclude all low grades of error as unimportant and physiologically normal —a point which experience in correcting small errors fully disproves. Small grades of ametropia are quite as often the cause of asthenopia as the larger ones; and while far from asserting that the weak glasses of my test case are the most important, I must needs recognize that this neglect of the low grades of refraction error is one of the few points in which Donders' great treatise has been found imperfect. One stronghold remains, but it is difficult to see how anything but blind prejudice can deem it impregnable. It is claimed by some that mydriatics give us a false view of the refractive condition of the eye, that paralysis of the accommodation is accompanied by a fictitious decrease of the refraction, and that the measurements so obtained must be "*discounted*" in order to arrive at the true *static refraction* or condition of entire rest. Merely negative evidence can be adduced in support of this view, and abundant positive evidence to the contrary is readily accessible. The oft-quoted statement of Donders is cited, that "a tone of accommodation" to the extent of .37 to .90 D. is usual and can be relaxed only by accommodative paralysis —a view from which he did not publicly recede, so far as I know. Yet he wrote to me as to this in 1885: "The difference is slighter than I had supposed and may be neglected for the myopic eye. Another question is whether it depends on the tone of accommodation, which can only be supposed (as existing generally in not-striped muscular tissue), but not proved."

The resting points for this view are the facts that a mydriatic often shows a lower myopia or a higher hypermetropia than is discoverable before or after its use, and that most people complain of blurred distant vision if the full mydriatic correction is given.[4] Most persons certainly do *at first*, or at least most hypermetropes; but it is exceedingly pertinent to ask why *all* do not, and why myopes are rarely much troubled in this regard. The answer is really self-evident—the myope has generally established no habitual accommodative tension; if it is present in any case, every one recognizes it as an "accommodative cramp," not a "tone." The hypermetrope, on the other hand, has so long maintained his accommodation tense, even in distant vision, that he finds it hard to unlearn the habit when it becomes no longer necessary. What ophthalmoscopist ever found it easy at once to relax all accommodative effort, or even after he has learned to relax, finds it always possible to do so? An eye whose accommodation has long been cramped is apt to return to its cramp when the mydriatic wears off, and will, therefore, see imperfectly at a distance with the totally correcting glass. If such a difficulty lasts more than a fortnight, as it will in a very few cases, it is almost invariably because of muscular insufficiency which has not been corrected. The essential question here to be considered is whether the mydriatic, pushed to total paralysis of the accommodation, invariably gives an untrue picture of the refraction and causes an artificial hypermetropia, as has been claimed. From two points of view this claim can be distinctly disproved. First, the cases are not very rare in which full mydriatic paralysis gives identically the same result as was obtained with active accommodation; and secondly, a large number of cases can be taught fully to relax their accommodation and obtain full vision with a glass totally correcting the defect revealed under the mydriatic. The length of time and the amount of annoying blurring before this is gained vary in different cases; and the question must always present itself to the practitioner, whether the benefits may not be fully gained and the discomfort lessened by giving an under-correcting glass. But this is a question of expediency, not of necessity; and those who habitually give total corrections and insist upon their constant wear, fail in few cases to obtain the desired result.

In the appended table of cases will be found, first, a group where the refraction was unchanged

[4] As Dr. Jackson has pointed out, full correction for 5 metres is really 0.2 D over-correction for distance, a point usually forgotten.

by the mydriatic; second, those who obtained full vision with totally correcting glasses; and third, a series to show how far astray the manifest error was from the true refraction. Of the first class of these cases, where the refraction was the same before and with the mydriatic, I have few accessible records, and I cannot, like Roosa, cite 6 eyes out of 20 which remained absolutely emmetropic under atropine. Yet every one who has put this matter to a fair test has met such cases, not only in middle life, but even in childhood. In the school examinations, Cohn reports 34 cases whose manifest hypermetropia was absolutely unchanged by total atropine mydriasis; and Dürr obtained like results under homatropine. Such cases, if not common, are not the less emphatic in their teaching. Of those who have received totally correcting glasses and with them have obtained full vision, dozens might be cited, although I have not tested and recorded the ultimate vision in even one-half of those who ceased to complain of blurring for distance, and have chosen only hypermetropes here as illustrations. Of the third group only a few are brought forward, because no one who has ever used a mydriatic can doubt that, in a large proportion of cases, the true result cannot possibly be obtained without it. These are all recent cases from my private record.

And here let me say as to my refraction work, that it is all done under conditions practically identical, with good uniform illumination on the test card, that the mistake of even a single letter in a long line has been signified by a question mark, that the minutest errors and discrepancies have been noted, and that full mydriatic paralysis has not been assumed merely because a mydriatic had been several times instilled, but proven by careful tests both for distance and for near. In the latter case an artificial far-point of 25 cm. has been generally used, and as the test object the finest of type or Burchardt's dots.

While a mydriatic has been habitually employed, it has been always regarded as a disagreeable measure, which should be avoided if possible; and accordingly, among the last 250 cases on my record, I find that there were 175 of refraction error (exclusive of presbyopia), and in 101 of these a mydriatic was used. Of the remainder, there were 53 patients less than 45 years of age to whom no mydriatic was given. This was not always from choice, for there were some of these cases where the mydriatic was advised, and the manifest glass was given only tentatively and under protest. There were also a few cases where I refused to give a glass without full use of a mydriatic, and thereby lost the patient: but these have not been included here. The method of employment has depended upon the mydriatic and the case. With hyoscyamiæ sulphate, which I much prefer, a 2-gr. solution has been prescribed, to be instilled one drop in each eye at bedtime and again on rising, with perhaps another instillation before the measurement. Dark coquilles or a thick veil have been worn to shade the eyes from glare, and the examination generally repeated, with continued instillation, on several days. Retinoscopy with the plane mirror at 4 metres distance, and the ophthalmoscope, have been used as control tests—the former being specially valuable, since with it discrepancies of .25 D. or of 5° in cylinder axis can hardly be overlooked.

As a mydriatic, hyoscyamine is probably unequalled. Chemically identical with duboisine, it yet seems distinctly less inclined to exert the toxic action which too often made the latter drug a treacherous ally; and in a strength of 2 grs. to the ounce it rarely causes any constitutional symptoms. Its action is more prompt and energetic than that of atropia in stronger solutions, and its full action is obtained in about half an hour. Even after a single instillation there is little or no diminution in its effect for about seventy hours, while the troublesome period of returning accommodation is only about two days. Recovery from its effect is as complete in five days as on the tenth day after the use of the atropia, although the grasp of the latter drug begins to waver much earlier, while the hyoscyamine is still in full control. A week can generally be set, therefore, as the time during which near work must be abandoned on its account, while the similar period for atropia is quite two weeks. This is a strong point in its favor, since it is quite trouble enough to disable the patient for the shorter period; but its highest value lies in the unvarying grasp upon the accommodation for about three days after the last instillation, so that the rest which it enforces is generally absolute. As this "putting the accommodation in splints" is one of the special indications for the use of a mydriatic, and one in which the atropia gives at most two days of rest, the superiority of the shorter-lived mydriatic is manifest. No value of this sort attaches to the use of homatropine; but in eyes that are not very irritable, total paralysis can be obtained by several instillations of a 6-gr. solution, and it has much value in its narrow field.

When, with or without a mydriatic, a glass is found which gives the best attainable vision and is confirmed by the retinoscopy and ophthalmoscope, there is room for judgment as to whether it shall be ordered as it stands or be modified to meet some special indication of the case; but there is in few cases anything but disadvantage in waiting until the mydriasis has wholly disappeared before ordering the glass. The accommodation and muscular condition should be determined at the first examination, and furnish, with the history, the only data which legitimately influence the decision as to the glass to be given. Upon one general rule I should like to insist, because

it would seem to be followed by few, and that is that the total correction should be given unmodified, except for clear and definite cause. It is not always wise to give full correction to myopes; but I am persuaded that if our European colleagues would do more of it, with careful correction of astigmatism, they would see far less progressive myopia. As has been said, it is sometimes very difficult to get a hypermetrope to accept the total mydriatic correction; and, in the absence of strabismus or asthenopia, policy may dictate a reduction of the convex spherical by .25 or .5 D. Insufficiency of convergence, especially for distance, generally makes the use of the total correcting glass impossible unless it is combined with a prismatic correction. This latter can often be most satisfactorily obtained by modification of the centreing of the lenses. Inattention by oculists and opticians to this matter of precise centreing is a prolific source of unsatisfactory results, which very little care could wholly avoid; and the oculist should specify the exact distance between the optical centres, and make a point of verifying the strength and fit of every glass he orders, if possible.

While there is little in the foregoing that can make the least claim to novelty, since most of it has been previously and better said, it contains much, I believe, which is at present accepted and applied in practice by only too small a minority. I beg leave, therefore, in closing, to reiterate the following points and to urge their importance upon all who are doing ophthalmological work:

1. Errors of refraction are present in the great majority of cases, but need correction in only a portion of those who suffer with eye-trouble.

2. In all correction of refraction errors, the manifest refraction is as uncertain a basis as a quicksand, and the *static* refraction is the only true basis on which to work.

3. A mydriatic is often required in order to give the eye a needed rest and to measure correctly the refraction, and it must be used to the extent of total ciliary paralysis to meet this end, as a small remnant of accommodation is sufficient to mask astigmatism as well as hypermetropia.

4. The glass as determined under full mydriatic paralysis measures the true static refraction of the eye.

5. The glass given should accord with the static refraction of the eye, being modified only for good and definite cause.

6. The minutest accuracy is desirable as to the strength and fitting of the glasses, and the width of the optical centres should be exactly prescribed.

7. The balance of the ocular muscles should be strictly studied in every case, since these relations have important bearings upon the ordering of lenses.

8. If these matters have been properly studied when the case is first seen, there is rarely any need of delaying the ordering of the glasses until the accommodation has returned.

Cases illustrating refraction unchanged by full mydriasis:

1. Miss Kate S., aged 24; Right eye V. = $\frac{6}{6}$ +, no astigmatic lines chosen, near-point for D = .50 13 cm., with + .75 spherical V = $\frac{6}{6}$?+; under homatropine with +. 90 or .75 sph. V = $\frac{6}{6}$: Left Eye V = $\frac{6}{6}$ +, with +. 65 cylinder axis 180° V = $\frac{6}{6}$? +, under hom. with +. 65 cyl. axis 180° $\frac{6}{6}$.

2. Miss Mary W., aged 24; R. E. $\frac{6}{6}$, with − 10. sph. $\frac{6}{12}$ +, no lines chosen; under hyoscyamine − 10. (with or without − .50 cyl. axis 15°) $\frac{6}{7}\frac{1}{2}$?: L. E. $\frac{6}{6}$, − 10. sph. $\frac{6}{12}$ +; under the mydriatic − 10. s. (◯ − .50 cyl. axis 150°?) $\frac{6}{7}$? Without glass D = .50 5 to 10 cm. each.

3. George B., aged 16, R. E. $\frac{6}{36}$, no lines, D = .50 read from 8 to .25, cm., with − 3.25 sph. $\frac{6}{6}$; under homatropine with − 3.25 $\frac{6}{6}$: L. E. $\frac{6}{50}$, no lines, same accom., with − 4. sph. $\frac{6}{6}$; under hom., − 4. sph. (or − 3.5 s. ◯ − .50 c. axis 180°?) $\frac{6}{6}$.

Cases illustrating full vision through the totally correcting lens:

1. John W., aged 10; Right Eye V = $\frac{6}{12}$, lines chosen at 180°, near-point 11 cm. for D. .50, eye hypermetropic but vision made worse by any convex glass; under hyoscyamine with + 2.5 sph. ◯ + .90 cyl. axis 90° $\frac{6}{15}$. The left eye gave an identical result, before and after the mydriatic. Six months later he came with the glasses broken and claiming to see better without them; but saw $\frac{6}{15}$ and $\frac{6}{12}$ without, and $\frac{6}{12}$ each with them. A few months later his vision had risen to $\frac{6}{7}\frac{1}{2}$? each through the glass, and accom. was normal.

2. Robert L., aged 17, R. E. $\frac{6}{6}$, lines at 180°, near-point 10 cm., with + 1. s. ◯ + .37 c. axis 90° $\frac{6}{6}$ +: L. E. same vision and accom., with + .90 s. ◯ + .37 c. axis 90° $\frac{6}{6}$ +. Hyoscyamine showed R. + 1.25 s. ◯ +: 25 c. 90° $\frac{6}{6}$, and L. + 1.25 s. ◯ + .37 c. 90° $\frac{6}{6}$; and the result has remained unchanged since, although a low grade of exophoria is present.

3. Richard S., aged 33, R. E. $\frac{6}{7}\frac{1}{2}$, lines 170°, near-point 22 cm., with − .50 cyl .80° $\frac{6}{6}$; under hyosc. +. 65 c. 180° gave $\frac{6}{7}\frac{1}{2}$, which became later $\frac{6}{6}$?; L. E. $\frac{6}{6}$? +, with − .50 c. 100° $\frac{6}{6}$; under mydriatic +. 25 s. ◯ .50 c. 150° gave $\frac{6}{7}\frac{1}{2}$, later $\frac{6}{6}$.

4. Flora J., aged 13, R. E. $\frac{6}{6}$, no lines, near-point 11 cm., H. m. +.65 s. $\frac{6}{6}$; under hyosc. +.75 s. ◯ +.65 c. 90° gave $\frac{6}{6}$: L. E. $\frac{6}{40}$, no lines, D = 1.50 read at 17 cm., + 2. s. ◯ + 2.5 c. 90° $\frac{6}{30}$?; under hyosc. + 2. s. ◯ + 3. c. 90° gave $\frac{6}{12}$?+. A month later the vision was still $\frac{6}{6}$ + on the right and $\frac{6}{15}$? + on the left.

5. Sadie D., aged 26, R. E. $\frac{6}{7}\frac{1}{2}$?, lines 180°, near point 15 cm., with + 2.5 s ◯ + .64 c. 90° $\frac{6}{6}$?; under hyosc. + 3.25 s. ◯ + .50 c. 90° $\frac{6}{6}$?: L. E. $\frac{6}{7}\frac{1}{2}$?, same lines and near point, with + 2.5

s. ◯ + .25 c. 90° $\frac{6}{8}$?, under hyosc. + 3.25 s. ◯ .50 c. 90° $\frac{6}{8}$. As this seemed a slight over-correction + 3. s. ◯ + .50 c. 90° was given, and with it three months later each eye saw $\frac{6}{4}$? Agnew had given sphericals + 2.75 and 2.5 several years previously.

6. Miss M., aged 23, R. E. $\frac{6}{7\frac{1}{2}}$?, no lines, near-point 22 cm., H. m. + .90 s. $\frac{6}{7\frac{1}{2}}$?; under hyosc. + 1.5 s. ◯ + .37 c. 90° $\frac{6}{7\frac{1}{2}}$?; L. E. $\frac{6}{9}$?, no lines, same accom., with + .90 s. $\frac{6}{9}$?; under the mydriatic with + 1.5 s. ◯ + .37 c. 90° $\frac{6}{7\frac{1}{2}}$? +. She was still able to read many of $\frac{6}{8}$ with each eye when seen after the mydriatic had disappeared, and has remained comfortable with constant wear of her glass.

7. Mrs. L., aged 34, R. E. $\frac{6}{8}$?, no lines, H. m. + .25, same vision; under hyosc. with + .25 c. 90° $\frac{6}{8}$?; later $\frac{6}{8}$ full: L. E. $\frac{6}{6}$, lines 15°, with + 3.5 c. axis 105° $\frac{6}{10}$; under mydriatic + .5 s. ◯ + 4.5 c. axis 100° $\frac{6}{12}$: same vision after return of accom.

8. Mrs. W., aged 44, R. E. $\frac{6}{24}$, lines, 150°, with + 1. s. ◯ + .50 c. axis 60° $\frac{6}{12}$?; under hyosc. with + 1.5 s. $\frac{6}{8}$?. later $\frac{6}{8}$: L. E. $\frac{6}{36}$, lines at 30°, with + 1.25 s. ◯ + .50 c. axis 120° $\frac{6}{12}$?; under hyosc. with + 1.75 s. ◯ + .65 c. axis 90° $\frac{6}{7\frac{1}{2}}$ +; later $\frac{6}{8}$?.

9. Mrs. H., aged 30, R. E. $\frac{6}{30}$?, improved by no glass, lines 165°, read D = .5 at 15 cm.; under hyosc. with + .25 s. ◯ 1.5 c. axis 90° $\frac{6}{15}$? +, later $\frac{6}{15}$?: L. E. $\frac{6}{12}$, lines 90°, D = .5 from 30 to 45 cm., with + 2. s. $\frac{6}{12}$; under hyosc. with + 3.5 s. $\frac{6}{9}$, later $\frac{6}{9}$ +. The lowered vision was due to hazy and irregular corneæ, worse on the right.

10. Mary C., aged 16, R. E. $\frac{6}{8}$, no lines, near-point 12 cm., with + .65 s. $\frac{6}{7\frac{1}{2}}$; under hyosc. with + 1. s. ◯ + .50 c. axis 80° $\frac{6}{8}$; L. E. $\frac{6}{8}$, no lines, same near-point, with + .90 s. $\frac{6}{7\frac{1}{2}}$; under mydriatic with + .9 s. ◯ + .65 c. axis 100° $\frac{6}{7\frac{1}{2}}$ +. As these seemed slightly over-correcting, + .75 s. was given in combination with the cylinder for each eye; and when last seen the right had V = $\frac{6}{6}$?, left $\frac{6}{8}$ full.

Cases illustrating marked differences between the manifest and true refraction.

1. Mrs. C., aged 38, R. E. $\frac{6}{9}$? +, lines chosen at 105°, near-point indeterminate, with — 2. c. axis 80° $\frac{6}{12}$? +; under hyoscyamine with + 2.25 c. axis 120° $\frac{6}{7\frac{1}{2}}$? + ; L. E. $\frac{6}{15}$? +, lines at 105° near-point 18 cm. for D = .5, with — 2. c. axis 165° $\frac{6}{12}$?; under hyosc. with + 2. c. axis 80° $\frac{6}{7\frac{1}{2}}$? +.

2. Lizzie K., aged 23, R. E. $\frac{6}{36}$, lines at 120°, large print spelled with difficulty, with — 3. s. ◯ — 2.5 c. axis 35° $\frac{6}{20}$?; under hyoscine with — 1. s. ◯ — 4.5 c. axis 45° $\frac{6}{7\frac{1}{2}}$? + : L. E. $\frac{6}{60}$, lines at 60°, large print at 10 cm., with — 4. s. ◯ — 2.5 c. axis 150° $\frac{6}{20}$?; under hyoscine with — 1. s. ◯ — 5 c. axis 150° $\frac{6}{15}$? +. These seemed accurate, but the cylinders alone were ordered; and with them she had a month later $\frac{6}{12}$? each. Three years later she returned with $\frac{6}{12}$, most of $\frac{6}{9}$, on the right and $\frac{6}{15}$ on the left, with these glasses. Her glasses had been frequently strengthened before coming to me, and she was wearing — 6.5 sphericals given by an optician "professor."

3. Miss M., aged 34, R. E. $\frac{6}{12}$? +, lines at 105°, large print at 35 cm., with + .65c. axis 105° $\frac{6}{9}$??; under hyoscyamine with + 3. s. $\frac{6}{6}$??: L. E. $\frac{6}{8}$??, no lines, near-point 25 cm., all glasses rejected; under hyosc. with + 2. s. $\frac{6}{8}$? These were given, but worn little except for near work; with them when last seen $\frac{6}{9}$?? right, and $\frac{6}{8}$?? left.

4. Miss Minnie C., aged 22, R. E. $\frac{6}{12}$, with — .75 c. axis 105° $\frac{6}{12}$; under homatr. with + 1. s. ◯ + .50 c. axis 20° $\frac{6}{9}$ + : L. E. $\frac{6}{12}$, with — .25 c. axis 75° $\frac{6}{12}$ +; under hom. with + 1. s. ◯ + .75 c. axis 160° $\frac{6}{9}$ +. Some exophoria, and she had worn concave glasses.

5. Mrs. G. R., aged 22, R. E. $\frac{6}{60}$, lines at 75°, chose — 3. s. ◯ — 2. c. axis 165°; under hyosc. with — .75 s. ◯ —3.5 c. axis 170° $\frac{6}{12}$: L. E. $\frac{6}{12}$, lines at 100°, chose — 1. s. ◯ — 1.5 c. axis 10°; under hyosc. with — 2.75 c. axis 10° $\frac{6}{8}$? With these the vision was slightly better when last seen.

DR. LIPPINCOTT: In the main I agree with the conclusions reached by Dr. Randall, because he distinctly states that the ametropia is to be fully corrected provided there is not some sufficient reason for not following this rule. In my opinion, cases presenting such conditions are not very unfrequently met with. For example: I sometimes find that the distortion of retinal images observed after correcting ametropia is so great that it becomes necessary to refrain from prescribing completely correcting glasses. This is especially noticeable in the case of artists affected with astigmatism of comparatively high degree and with axis oblique.

DR. JACKSON: The explanation of the period of complete rest of accommodation seems to me due to the excess of the dose used over the dose required to produce barely complete paralysis with the mydriatic used. I would confirm the reader's estimate of the benefit of giving the correcting lenses while the eyes are still under a mydriatic. A point not generally understood is that it is often as hard for the patient to become accustomed to partial correction as to a full correction, if the correction be for more than the manifest hyperopia. In some cases that have failed to see clearly with a partial correction of hyperopia, the full correction has been promptly accepted.

DR. DE SCHWEINITZ agreed entirely with the essayist, except in his choice of mydriatics, as he believed atropine was more efficient than hyoscyamine. In addition to the value of a strong mydriatic in aiding the determination of the refractive error accurately, this drug — atropine preferably, he thought—had a distinct therapeu-

tic influence upon the low-grade retino-choroidal irritations so commonly present in ametropic eyes —an influence, moreover, unattainable by a mere disuse of the eye without the local application of the drug.

THE PREVENTION OF MYOPIA.

Read at the Sixteenth Annual Meeting of the Mississippi Valley Medical Association at Louisville, Ky., Oct. 9, 1890.

BY FRANCIS DOWLING, M.D.,
OF CINCINNATI, O.

The simplest and at the same time the most concise definition of myopia is given by my friend and former teacher, Dr. Landolt, of Paris, when he says that "myopia is present whenever the retina is situated behind the focus of the dioptric system of the eye."

Before proceeding with the remarks on the means of preventing or limiting the development of myopia or near sight it will be well to give a brief outline of some of the principal causes of the affection, and for this purpose I have looked up the leading authorities on the subject. Schweigger, of the University of Berlin, is of the opinion that in the majority of cases myopia is congenital, or inherited, or, at least, there is a predisposition to it contracted through the parents. It occurs in early childhood and shows with the increase of years a progression both in frequency and degrees of development. Myopia may remain stationary through life, or at an advanced age it may show an apparent or actual decrease; the apparent decrease is due to the contraction of the pupil by which the circles of diffusion are made smaller and the images of distant objects more distinct. In other cases the affection is rapidly progressive during a period of life, generally up to about the twenty-fifth year, and after that remains stationary. Finally, in a small percentage of cases, the trouble is progressive through life.

Cases of myopia in children before the eighth year are extremely rare. On the other hand, previous to this age, hypermetropy generally exists. The trouble commences to manifest itself about the tenth year, and from that time on until the eighteenth year makes its greatest progress.

The accompanying table will serve to prove this fact. They are taken from the schools in the countries named:

GERMANY.		NEW YORK.		PARIS.	
Age.	Per cent.	Age.	Per cent.	Age.	Per cent.
6–8	11	6–8	3	7–9	6
9–10	15	9–10	5	9–13	6
10–11	20	11–12	10	11–13	6
13–14	25	15–16	15	10–19	8
15–16	40	17–18	20	10–15	13
16–17	45	18–19	25	13–15	4
17–18	50	20–21	26	13–16	23
18–19	55			15–18	25
19–20	60			15–19	50
20–21	62			17–19	75

It has been proven by statistics that myopia increases both in frequency and degree as one goes from the lower to the higher classes in schools. This might be explained by the fact that the age increases as one ascends in the classes, but statistics show that, irrespective of age, this increase in the frequency and degree of myopia bears a pretty regular ratio to the number of working hours. In this regard, Erismann, of St. Petersburg, gives the following statistics:

Among scholars occupied two hours per day, 17 per cent. myopia.

Among scholars occupied four hours per day, 29 per cent. Among scholars occupied six hours per day, 40 per cent. and so on.

Prof. Donders, of Utrecht, thinks that myopia is not equally prevalent in all countries, but is more particularly met with in cultivated nations, and further, that among the countries visited by him, he no where met with so many near-sighted people as in Germany. This tallies with my own experience; I witnessed proportionately more near-sighted people in the eye clinics of Germany than in any other country of Europe. Another thing I noticed was that the intellectual centres, or in other words, the university towns, had proportionately more near-sighted people than other places not university seats. Hence I infer that the very high educational standard in Germany, particularly in the college centres, by causing over-work of the eyes causes the greater percentage here than elsewhere.

Myopia is not usually directly transmitted from parents to children, but only a predisposition to the affection; in other words, all the conditions necessary to the production of the affection are inherited from the parents, needing only the addition of some exciting cause, such as over-exercise of the eyes in study, etc., to develop the affection in children, just as children of tuberculous parents inherit no consumption directly, but only the flat chest, the narrow shoulders, a weakly constitution, a tendency to contract colds, etc., in short, a predisposition to the disease.

It has been observed that in the transmission of this predisposition to myopia from the parents to the children, a father, as a general thing, transmits to sons only, and a mother to daughters. Cohn, in an analysis of some twenty-eight cases, found this rule to hold good. It is also found that in this hereditary transmission the affection usually confines itself to one sex; for instance, we often find that all the daughters in certain families are near-sighted, while the sons have normal vision.

In cases where both parents are myopic, the disease in being transmitted, manifests itself in a lighter degree in the children than in that of either parent, and very often it corresponds in degree to the sum of that found in both parents.

The time allotted for my paper is not sufficient

to enable me to enter into anything like an elaborate consideration of the causes of myopia, for this reason it will be sufficient to state here that the weight of testimony seems to show that the causation of myopia depends on two essential factors, the first of which is an inherent predisposition on the part of the person, inherited, or otherwise; the second a determining cause, which may be looked upon as a species of seed which when planted in the prepared soil of predisposition, causes the development of the disease.

Among the predisposing causes may be mentioned arrests of development of the sclerotic coat of the eye, a peculiar conformation of the globe, and chief of all, the disease called choroiditis in its various forms. In this connection it will be well to mention that in cases of hereditary predisposition there is a congenital weakness of the sclerotic coat, and more especially in its posterior half. The contents of the globe of the eye, under any undue exertion of the organ, causes pressure on this naturally weak spot; this pressure causes the membrane to stretch and give way in a measure, and thus are started many of the cases of so-called progressive myopia. Among determining causes may be mentioned the acts of convergence and accommodation in using the eyes for near work, as for example, in reading, writing, sewing, etc., as both these acts tend to increase the intraocular pressure of the eye, and the pressure, spending its force principally on the membranes of the eye causes them to stretch and give way, particularly in their posterior sections, and in this way the majority of cases of myopia are started, and if the cause is kept up, of course the trouble will continue to increase in degree.

The first endeavors to find out the causes of myopia, were, it seems, made in Germany, where the trouble prevails to a greater extent than in most other countries. In this country Dr. Cohn examined the eyes of some ten thousand children, and found that one thousand of them were more or less near-sighted. He also found that the trouble steadily increased, both in regard to the number of cases, and in the degree of refraction, as he went in his examination from the elementary to the higher schools. Another discovery which he made was that there were, relatively, more cases of myopia in badly lighted schools than in those that were more favorably arranged in this respect. The publication of these facts by Dr. Cohn caused quite a stir in the school boards of Europe. Lord Montague brought the matter before the British Parliament, and, although nothing definite was done by that august body, still the official notice of the facts in this way attracted to the matter the attention of educators at large, and whatever could be done to bring about a better state of affairs was done, and a better condition of school rooms, in the way of illumination, fresh air, better printed books, a judicious abbreviation of the school hours, etc., were the results of the agitation. As a consequence there was a marked reduction of the percentage of myopia among the scholars in the schools where the reforms were carried out. In speaking of this subject, Florscheutz says that the number of myopic pupils fell from 21 to 15 per cent. three years after the building of the Coburg schools, according to hygienic principles, and Von Hipple, in an address at the anniversary of the foundation of the University of Giesen, made the statement that he found only 34 per cent. of myopia in the new schools of Giesen compared with 40 per cent., which was the usual average in the old buildings.

Considering all the information that is at our disposal in regard to the factors that enter into the causation of myopia, both in its starting point and developing stage, no one ought to doubt that the prime factor in this causation is work with the eyes at near range; therefore, it stands to reason that the only way to prevent or restrict the affection is to limit or prevent altogether this near work with the eyes during the years that are known as progressive ones for the disease, viz.: from the tenth to the sixteenth year, and for this purpose I would make the following suggestions:

1. A child who shows any marked predisposition to myopia, and whose parents, one or both, were affected with the disease, should never be sent to the public schools, as they are now constituted, but should be sent rather to some private class where the number of hours of study and the tasks could be arranged to suit the condition of the scholar's eyes. Of course, the lighter the tasks and the fewer the hours, the better it will be for the eyes; this, in any given case, could be regulated by the family physician.

While on the subject it occurs to me that it would be a move in the line of progress, if a competent medical man could be appointed by our school authorities, particularly in our large cities, who should have general charge of the sanitary regulation of our public schools, and who should pay particular attention to regulating the tasks and the number of study hours for such of the pupils as showed any predisposition to myopia. To me it seems very unjust to have a uniform system of tasks and working hours for all pupils alike in the same grade, irrespective of the physical peculiarities of the individual scholars, for one who inherits a weakly constitution, weak eyes, etc., will necessarily deteriorate physically in trying to keep abreast of a colleague, who may be naturally endowed with stronger eyes, and stronger physical powers. Examples of this may be seen every day. If we look at the myopic scholars, for example, in our public schools, particularly in our own country where the rapid, high pressure system of education is in full vogue, and

where the standard is entirely too high, we find that a large percentage of these scholars are subjects with weary eyes, with pale, thin faces, in which the story is plainly written that the *mind* is being educated at the expense of the *body*.

2. The sanitary condition of the schools should be first-class, ventilation, light, etc., should be as near perfect as possible, and our school boards should spare no expense in keeping up this condition of things, for it has an immense influence both on the condition of the eyes as well as the general physical condition of the scholars.

3. Whenever the system of one affected with or predisposed to myopia, becomes at all relaxed, all work with the eyes should be suspended, until the health is again entirely restored to its normal condition; for it must be borne in mind, that it is during lowered conditions of the system that certain forms of myopia make their greatest progress.

In this connection it will be well to state, that from my own observations, especially in the clinics of Germany and France, a large percentage of those affected with myopia are burdened with some constitutional taint, such as the tuberculous, scrofulous, etc., owing to which, the powers of life are usually below a healthy standard, and this, in itself, is a potent factor in furthering the development of the myopia, and singularly enough, it is especially during the years that myopia makes its greatest progress, viz.: from the tenth to the twentieth year, that turberculosis and its near relation, scrofula, make their greatest advances, therefore the condition of the general health of a young person predisposed to myopia should receive the most careful attention on the part of the medical adviser.

4. Young persons, who may be predisposed to myopia, should never study at night time, all near work with the eyes should be done by good clear sunlight. If, however, artificial light is used for this purpose, the electric light is the best of all its competitors, such as gas, oil, etc., being far less injurious to the eyes, for the reasons that in point of color it more nearly approaches that of the sun, than any other artificial light known: Then its volume is more uniformly distributed throughout the room, and by virtue of the great strength of its illuminating focus, it can be placed high above the head, and still be of uniform service; and lastly, the light does not vitiate the atmosphere of the room, like gas, oil, etc If means could be invented to render the light steady, it would be the prince of all artificial lights for near work with the eyes.

5. The books from which one predisposed to myopia should study, ought to be printed with tolerably large type, and the Latin letters are the best of all others, as they are less fatiguing to the eyes than the German, etc. This fact is, probably, the reason why most scientific works and students' manuals throughout the world are now printed in Latin letters, and one thing that surprises me is that Germany, with all her intellectual progress, still retains the old, crooked German letters in book printing, and particularly in the daily papers, which are the poorest printed of any in Europe, and the bulk of the population have to read this miserable print, by the equally miserable light of a candle, as gas light is only enjoyed by the few in Germany. This fact struck me as one of the causes of the great amount of myopia that is found, particularly among the middle and poorer classes of that country. But to return to our subject: in reading, writing, etc., the eyes should be kept at a distance of about 30 centimetres from the text, and the reading, etc., should be frequently interrupted, so as to rest the eyes, they should be closed for five minutes or so at a time, or directed at some far away point.

6. In cases where the myopia is at all marked, all work with the eyes, such as study, etc., should be postponed until the sixteenth year. The child should, if possible, be sent to live in the country, where the range of vision is longer than in the city, and then it should be kept outdoors, in the fresh air, as much as possible.

7. The wearing of glasses by a myope is optional, at least for distant vision, as they have very little, if any influence in checking the progress of the affection. They are only useful as a means of enabling the wearer to recognize more clearly his surroundings, and when worn should be of a weaker refractive power than that necessary to correct the actual degree of myopia present, and they should not, as a general thing, be put on before the fourteenth year.

If, however, the myopia is beyond a certain degree, say three dioptrics, then the use of proper concave glasses for reading and all other near work, may limit in a measure the progress of the disease by relieving the strain on the muscles of convergence, and in this way lessening the tension on the globe of the eye, which is one of the great factors in furthering the march of the affection.

8. In tolerably pronounced degrees of myopia I have found paracentesis of the cornea by means of a fine needle to do a great deal of good. It relieves the intraocular pressure that is often very marked in such cases, and thus retards the progress of the myopia; then another thing, it lessens the chances of detachment of the retina, which often takes place in high degrees of the affection. In practicing the operation, after making the puncture in the cornea, I usually cause the fluid to escape from the anterior chamber slowly, by pressing on the cornea, alternately, with the lower and upper eyelid. Twice a week is as often as I practice this treatment in any given case. The great advantage in letting the fluid escape slowly, is that the shock to the eye is not as great as when it is emptied rapidly.

DR. HAROLD N. MOYER, of Chicago, in opening the discussion, said: While I do not claim to be competent to discuss this paper, yet I feel that something ought to be said because of its evident value. There is certainly no subject in the range of ophthalmology of greater practical importance than the one to which this paper has been addressed. It is an able contribution—one that should be widely read by the general profession. I trust that the writer will not have it printed in the *Archives of Ophthalmology* or in some equally specialized journal, but publish it in some widely circulated journal, so that it can be read by the whole profession; for it seems to me it will do a vast amount of good if it is put into the hands of the general practitioner. In this way the subject can be brought before the various school boards in small as well as large country towns, and indeed in every large city.

DR. C. H. HUGHES, of St. Louis, Mo.: Inasmuch as other gentlemen do not manifest a desire to discuss this interesting question, I can hardly permit such a paper to pass without expressing my appreciation, as a general observer in medicine and a practitioner of thirty-one years' active daily experience, of the value of the position taken by the author of the paper in regard to the best methods of preventing and ameliorating this condition among our school children.

Germany has become largely a nation of myopics, and I hope that will never be the fate of America. There is something in the organic aptitude of the individual that develops myopia. To illustrate: It is not necessary that either of the parents should be myopic, and this question comes as near home to me as any one in medicine, for, belonging to a family that never had to wear glasses prematurely; married to a lady none of whose family had to wear glasses prematurely, there has developed in my family (in one of my children) this trouble. All of the other members of the family are free from it. I never wore a glass of any kind, nor my father or mother, until from 43 to 45 years of age, and these are the circumstances under which myopia appeared in my child.

At the age of 6 years the child became the victim of an exhausting fever—scarlatina. He convalesced tardily so far as the restoration of general vigor was concerned. There were no aural sequelæ, but there was evidence of damage done to the central (neural ganglionic) influences which preside over the nutritional processes of the organism, and it was with the utmost difficulty that I succeeded in rescuing my boy from decline. It became necessary to resort to all the therapeutic resources which would occur to a solicitous father practically familiar with the resources of our art. He was carefully and thoroughly nourished, he was tranquilized at night, so that he did not lose the sleep he required for recuperation, his digestion was taken care of, and I traveled with him into invigorating atmospheres, but, in spite of all care, myopia developed. It is the first case that has shown itself in my family. There is no ancestral history which would lead us to expect it to appear in the family.

There is a great deal more behind myopia than is dreamed of in our present philosophy. We are very apt to explain it by attributing it to congenital deficiency of development alone, though it undoubtedly is the direct and immediate causative factor. But what is it in the organism of the child that singles out one of a family and, in the process of evolution from infancy up through childhood, causes the appearance of this deficiency? Of course, it is a failure in the central nutritional processes. There is a *minus* condition there instead of that *plus* process. There is a neuratrophic predisposition which makes the sequent myopia a possibility in myopics, and this may be either congenital or acquired. Myopic eyes are like congenitally shortened limbs, or like those trophic lesions that follow certain nerve trunk or nerve injuries, only in lessened degree. The methods of treatment, to be successful, must extend beyond the eye, and the oculist who satisfies himself with the immediate rectification of the condition of the eye alone that presents itself, will have only final failure for his pains.

Now, since the doctor advises outdoor exercise and all the conditions necessary for the proper evolutionary and developmental processes going on in the child, I would like to have him observe in the practice of his cases in the future the result of that treatment, and to find out how many of them are arrested and what proportion are ever cured. It is a question that becomes interesting when it strikes one's own family, and there is no doubt in my mind that myopia is just as much a product of abnormal and inadequate nutritional processes in the organism as the defective conditions in neurotics are, and the ophthalmologist, like the neurologist, otologist, or any other man who does special work in medicine, is the most successful practitioner who extends his range of observation and treatment beyond his immediate environment or practical work.

DR. C. W. MCINTYRE, of New Albany, Ind.: I do not know whether or not the writer of the paper called attention to the fact, that one of the principal causes of myopia is absence of proper light in residences as well as in school houses, but I know that to be true from experience. Myopic patients come to my office and consult me, and, after inquiry, they inform me that their residences and workshops are not properly lighted as I think they should be, and it is really necessary for our school boards to look after the sanitary condition of the schools in so far as they are properly lighted, etc.

I differ with the essayist in one particular, and that is, that the electric light is preferable to the other lights which he mentioned. I think an extreme light is just as damaging to the eye as insufficient light. We know that a number of myopic patients trace their condition to improper glasses used in reading or working. If our sanitary officers were to look after this, we would have less myopia in this country. If there is not more done in the future than there has been in the past, I fear we will get into a condition like Germany. It is necessary for every physician to take this matter into consideration.

As Dr. Moyer said, the paper should be placed in the hands of not only every specialist who devotes himself to ophthalmology, but it should reach the eye of every local practitioner, because we all have more or less of this class of patients which require our attention.

I wish to emphasize the fact that the absence of proper and sufficient light in residences and school houses is one of the principal causes of myopia as well as amblyopia.

DR. DOWLING, in closing the discussion, said: Something should be done to prevent this growing trouble. I am satisfied that were it not for intermarriages, especially in university centres, it would only be a question of time when we would all become myopics in this country. Were it not for the fact that people from the country intermarry with those of the city, myopia would be more prevalent than it is. This intermarriage is the only thing that saves us from becoming myopics. It occurs to me that it is becoming more and more frequent, especially in children, in our large cities. Take, for instance, Cincinnati, or any other large city, and we will meet with a large number of cases.

I believe that the appointment of a private medical officer would be a step in the right direction. I spoke to my friend, Dr. Culbertson, not long ago about this, and he said the health officer was supposed to attend to it. The average health officer has no time to attend to such matters. In a large city with perhaps twenty-five or more school districts, it would take up a good deal of time; nevertheless I maintain that a medical practitioner should be appointed to look after the sanitary condition of the students and regulate their hours of study, etc.

IN order that the changes produced in tuberculous tissues by Koch's fluid may be determined as accurately as possible, the directors of the Charité Hospital at Berlin have given orders that the bodies of any patients who may die after having been treated by the new method shall be examined as soon after death as the law permits. Koch found such early examinations a great help in his investigations on cholera.

THE CLINIC.

UTERINE MYOMA—RENAL CALCULUS AND SURGICAL OPERATIONS UPON THE KIDNEY.

A Clinical Lecture Delivered at the Regular Surgical Clinic at Rush Medical College, Chicago, Thursday, Oct. 2, 1890.

BY CHARLES T. PARKES, M.D.,
PROFESSOR OF SURGERY.

Gentlemen:—The patient before you, Mrs. J. F., æt. 37, is suffering from an abdominal tumor which has been present a number of years, all the time gradually, and of late, rapidly increasing in size, until it has reached the large growth which you see fills the entire abdomen now that it is displayed to view. It is a source of serious trouble and annoyance to her and the burden of it is surely undermining her general health.

She has faithfully, during the last five years, tried various remedies and treatments, but they have proved of no avail; so under our advice, she has come to obtain relief by the removal of the mass.

Quite a variety of opinions have been expressed by different physicians whom she has consulted, as to the nature of the tumor; and this diversity of opinions increases the item of doubt which surrounds all extensive growths concealed by the abdominal walls.

Some have decided that it is an ovarian tumor, cystic in character; others have supposed it to be an outgrowth from the uterus itself, forming what is called a fibroid tumor or myoma. The difference between these two varieties of tumor is very wide indeed, and usually there is no difficulty attending the diagnosis between them.

It makes, also, a very great difference to the patient whether the tumor is connected with the ovary solely or with the uterus. If connected with the ovary it is usually easily and safely removable; if an outgrowth of the uterus, it is removed many times with great difficulty, and the removal is dangerous to the patient, for, in the majority of cases, the uterus and its appendages must be removed with the tumor.

Now we will go over the salient points in the diagnosis of this tumor.

1. It has been slow of growth, giving a history of several years' duration, commencing low down in the midline of the abdomen where it was first discovered as a small hard mass. Its growth has been unattended, until within the last year, with any serious interference in any way with the patient's general health. Its growth for the first year was accompanied with a very noticeable increase in the amount of blood lost at each menstrual period, but the amount of blood lost has never been extremely severe.

2. Palpation of the abdomen shows that the

tumor is considerably larger than the uterus at full term; that it is smooth, even and regular all over the surface; that it is very hard and resistant to the touch; that it is non-elastic and does not fluctuate as a whole or in circumscribed areas. It is freely movable as a mass from side to side within small boundaries.

3. Percussion gives an absolutely flat sound all over the surface, with a boundary of resonance above it and in the post-lumbar regions.

4. Vaginal examination determines that the cervix is of normal size and length, and in proper position, rather high, as if lifted up. The finger, by pushing the vaginal walls upward, shows the cervix to seemingly grow upwards into a dense mass which cannot be limited. With the finger on the cervix, any and every motion made in the tumor by pressure through the abdominal walls is immediately transmitted to the cervix and it is moved accordingly.

All of these signs together lead me to the conclusion that we have to deal with a uterine tumor or myoma. The patient has been so informed, and she has been made thoroughly acquainted with the dangers attending the removal of tumors of this variety.

Well aware of the uncertainty in diagnosis accompanying all abdominal growths of large size, there will be some anxiety attending the disclosures of the abdominal incision. As soon as this is made the diagnosis can be definitely settled. The tumor's removal can only be accomplished by this incision which will now be made.

The opening through the abdominal walls should be made in the line of the linea alba from just below the umbilicus toward the pubis by a free use of the knife, and without a director, until the transversalis fascia is reached, as has just been done. Its length at first should be at least three inches, subsequently prolonged to reach the requirements of every special case.

When this deep fascia is uncovered to the full length of the opening through the skin, you should stop long enough to control the bleeding points in the wound. This is done temporarily by the application of these forceps; usually before the operation is completed, their pressure has permanently controlled the bleeding. This also prevents the blood from entering the peritoneal cavity when it is opened.

The opening through the remaining tissues, the transversalis fascia and the peritoneum, should be made carefully, in order to avoid wounding the bladder which is very likely to be carried up from its normal position into the line of the incision, in the development of a uterine tumor. It will also avoid wounding the tumor itself, or any other important viscus which may lie on the anterior surface of the tumor or between it and the abdominal wall.

This is best accomplished in all cases, by the plan usual with us, which we will now illustrate.

With these dissecting forceps the tissues at the extreme upper end of the abdominal incision, are seized by the operator and raised; at the same time the assistant, with similar forceps, raises them on the opposite side. With a free stroke of the knife an incision is made between the forceps. This procedure is repeated until a small opening is made into the peritoneum.

As soon as this is accomplished, one is frequently made aware of it, by the flow of peritoneal fluid through the opening, and a sight of the tumor. By this method the opening through the peritoneum is least likely to endanger the bladder.

The opening is very small, the tumor can just be seen through it, and yet I am satisfied that the diagnosis of myoma is the correct one, principally on account of the color of the tumor, which is dark red and vascular looking. Cystic tumors are steel white and shining.

With the finger inside the cavity, as a guide, the peritoneum is divided to the full length of the external incision. Now it is possible to see and feel the entire tumor and its relations. It has no adhesions—the bladder is not attached to its anterior surface. The broad ligaments are elongated and carried up to the highest point of the tumor on either side. One can see the immensely enlarged veins coursing between their layers. Here are the enlarged and elongated Fallopian tubes and the ovaries carried from their normal position high up into the abdominal cavity.

There can now be no doubt as to the character of the tumor. It cannot be drawn out through this small incision, so this must be enlarged upwards beyond the umbilicus sufficiently before the tumor can be delivered through the wound.

Before doing this it is best to introduce into the abdomen this large, thin, flat sponge, and to spread it out smoothly over the intestines, between them and the abdominal walls, in order to protect them and to keep them from bulging into the wound as it is increased in length.

This has been done and the incision made, controlling the bleeding as at first. A pair of snap forceps is put upon the peritoneal edge here and there to keep it from retracting or being pushed off the muscles of the abdomen. You notice that the sponge protects the intestines perfectly and enables the assistant to keep them up in the cavity of the abdomen, well out of the way of operative manipulation, in a manner entirely isolating the pelvis—this is a very necessary procedure.

As yet it is impossible for me to lift the tumor out of the pelvis so as to get at the proper point for its division. So that the next procedure consists in securing and dividing the broad liga-

ments on either side, for they bind the tumor down into the pelvis. This is called technically "tieing off" the broad ligaments and requires great care, in order to avoid opening any of the large veins and to enable one to apply ligatures to the ligament for the permanent closure of all the vessels included in its folds.

It is done by seizing the broad ligament as close as possible to the uterus with the thumb and finger of the left hand at a point about half way down its lateral wall, and pulling the included tissues away from the uterine wall. With the right hand a pair of blunt pointed forceps are thrust through the ligament between the fingers and the uterus and opened laterally, in this way a separation is made close to the uterus without opening any large vessels.

Through this opening a needle armed with a long double thread is passed. As soon as it is drawn well through, a sufficient length of it is cut off to answer the purpose of tieing that portion of the ligament which is left attached to the tumor and towards its top. This ligature is tied as close to the top of the tumor as it can be drawn, and prevents bleeding from the uterine side of the broad ligament.

The needle is still threaded and lies inside of the outer portion of the ligament. The thread is drawn through the needle far enough to make a second double ligature. The needle is then carried through the remaining outer portion of the broad ligament, at a non-vascular point, and this portion is tied in halves, just as one would tie the pedicle of an ovarian tumor. In this way all the vessels are securely fastened, and as the stump of the broad ligament is bisected by the ligature, it is very secure and little likely to slip.

This procedure is repeated in securing the broad ligament on the other side, and now the mass can be lifted out of the pelvis and we are ready to proceed to the next step of the operation, which is to permanently close the vessels in the uterus and tumor previous to its separation. This is done by tieing around the lower part of the tumor this piece of rubber tubing. The rubber tube is as large as the middle finger, and when in position, should be drawn as tight as your strength will permit, its ends crossed once and secured temporarily at the point of crossing by a Nelaton forcep.

The determination to practice the intra- or extra-abdominal method of treating the stump was made before the operation was begun. In this case we will adopt the extra-abdominal method because it has given the largest number of recoveries. The tube is applied at such height on the tumor, so that when the abdomen is closed, the rubber tube will be outside of the abdominal cavity without any tension on the stump. It is now in position and fastened so that we can divide the uterus and remove the tumor.

It is very essential to ascertain the position of the bladder before the rubber tube is fastened, in order to avoid including this viscus in its grasp. If the bladder is drawn upwards on to the anterior surface of the tumor, it must be carefully dissected away from the tumor before the rubber is applied.

In cutting away the tumor, the incision should be made sufficiently far away from the rubber to leave tissue enough outside of it to prevent the rubber from slipping over the end of the stump. It is proper to introduce a strong pin through the substance of the stump outside of the rubber cord, to further guard against the occurrence of any such accident.

Cases in which the tumor develops low down and implicates the cervix to such an extent as to prevent apparently the formation of a pedicle, can be managed safely in the following manner:

1. Apply the rubber cord as low down as possible, near to the vaginal juncture, to control hæmorrhage temporarily.

2. Remove the tumor by an incision through its substance, without reference to its size, high enough to make the pedicle sufficiently long.

3. Enucleate from the stump all the separate myomata, if there be any, or the pieces of myomatous tissue that may be found in it.

4. Apply the permanent ligature at the proper height and remove the temporary ligature.

Cases of myoma are not infrequently met with in which a true myomotomy can be done. In these cases the tumor is moderate in size, grows in the anterior or posterior wall of the uterus.

It is uncovered by an incision through the thin layer of uterine tissue investing it, when it can be shelled out or enucleated by the finger with ease, without opening the uterine cavity. The walls of the cavity thus left are brought together securely by a series of interrupted catgut sutures, commencing at the bottom; and the peritoneal edges are united by a continuous catgut suture. In such cases neither the uterus nor its appendages are disturbed.

Hæmorrhage is controlled temporarily by the rubber cord drawn over the uterus and broad ligaments below the tumor. The cord is removed as soon as the wound is thoroughly sutured.

Now that the tumor is removed we see that the uterine cavity is opened. We proceed at once to disinfect this cavity by the use of the actual cautery or pure carbolic acid in order to avoid infection from this source. After this is done the stump is entirely shut off from the abdominal cavity by sewing the peritoneal covering of the stump to the peritoneum of the abdominal walls, at the lower end of the wound. This is accomplished by a continuous catgut suture encircling the entire circumference of the stump, closely approximating these peritoneal surfaces.

Adhesions soon form and entirely occlude the abdominal opening at this point, preventing subsequent infection.

The peritoneal cavity is carefully cleaned of all blood clots, and if the large flat sponges have been properly placed, there is very little manipulation required for this purpose; as they have kept every thing out of the cavity.

Now make a careful survey of the entire field of operation to see that all the vessels are secure, also have all the sponges counted. You should know absolutely how many there should be, and it is well to get into the habit of using the same number for every abdominal operation.

The rubber tube is now permanently fastened, previously removing the Nelaton forceps, by a silk thread carried through the tube at the point at which the ends are crossed, and securely tied.

Next the abdominal wound is closed by a series of interrupted silk stitches passed through all the tissues of the abdominal walls at intervals of about half an inch. It is well to have the last stitch above, and the first below the stump, include some of the stump tissue, thus making sure the isolation of the stump from the cavity.

Last of all the dressing: The free surface of the stump is mummified by a large quantity of iodoform powder, or by the use of the actual cautery. In this case we use the iodoform. A narrow piece of iodoform gauze is placed around and beneath the projecting borders of the stump; the abdominal wound and the entire abdominal walls are covered with a free dressing of iodoform, iodoform gauze, and cotton batting, retained in position by a broad abdominal bandage.

The operation is now complete and the patient is in good condition, showing no signs of shock or exhaustion. The perils the patient has to encounter are first, from hæmorrhage caused by some fault in controlling the vessels; and second, from septic peritonitis. There is little fear from the former on account of the care we have taken. From the latter source the danger is greater, for in extensive operations of this kind the danger from infection is extreme, and cannot always be avoided even when practicing the most vigilant care to prevent it. If we have not infected the patient she will recover from the operation with little trouble.

The specimen is a beautiful example of uterine myoma. It shows how these tumors are often multiple, and how easily the separate masses can be enucleated out of their bed or capsule of condensed connective tissue. You will have an opportunity to examine it; you will be impressed with its density and hardness, so that in the future this sign of its character can be easily recognized by you.

The patient will be put into an even, smooth, well warmed single bed, with bottles of hot water about her under the cover.

In order to relax the abdomen and remove all possible tension from the recent and tender wound, a pillow should be placed under the bended knees, and her shoulders slightly elevated.

The bladder should be emptied every six or eight hours, by means of a thoroughly aseptic catheter, unless the patient herself can empty it without discomfort.

If the anæsthetic causes nausea, this will be best controlled by keeping the stomach absolutely empty, still occasionally this distressing condition is relieved by teaspoonful doses of very hot water.

Thirst and dryness of the tongue and mouth, is in part controlled by wetting the lips and mouth frequently with cold water. If all goes well, these symptoms will pass away inside of forty-eight hours, during which time the patient must be encouraged by cheerful attention. No feeding should be attempted until they have subsided, after which the patient can be fed any kind of bland nourishment, gradually increasing its strength to normal diet.

It is a good plan to secure an evacuation of the bowels at least on the third or fourth day, or sooner, if the nausea persists and there is some tympanitis present. This can be accomplished by administering teaspoonful doses of sulphate of magnesia or Tarrant's aperient, at intervals of three hours, until four doses are given, unless the desired effect is produced sooner. This result may be assisted by glycerine enemata.

If the patient has much pain, my partiality is the use of an injection containing thirty drops of deod. tinct. of opium, one drachm of whisky and two ounces of beef tea. Repeated if required by the severity of the distress.

The external wound will need no attention if there be absence of rise of temperature, until the seventh day, when, if union is complete, the stitches may be removed and new dressings applied.

Just as much care must be used to prevent infection during the dressings as during the operation. The stump will probably be separated entirely by the third week, when it can be removed and the remaining excavated ulcer dressed with ordinary care, until it is filled up with granulations and cicatrized over.

After as severe an operation as this, the patient should be kept in the recumbent or semi-recumbent position, for at least four weeks.

RENAL CALCULUS AND SURGICAL OPERATIONS UPON THE KIDNEY.

The next patient has this history: Three years ago she was taken with severe pain, suddenly coming on, referred to the left side of the abdomen in the neighborhood of the left kidney. The pain extended over the front of the abdomen, after a time, and spasms of it, described as shoot-

ing, ran down towards the left side of the pubis. After lasting for a few hours it ceased quite as suddenly as it began.

During the presence of the pain the patient felt a frequent desire to pass urine, but discharged only a tablespoonful or so at every attempt to evacuate the bladder, and its passage was accompanied with considerable tenesmus and a severe burning pain. When the attack ended the urination was accomplished easily and attended with a large flow of urine.

In addition to the agonizing pain which marked the onset of this attack, and which persisted during its continuance, the patient suffered from nausea and vomiting. There was also great pallor of countenance; the features were pinched; the skin was bathed in clammy perspiration; and all these were associated with symptoms of profound constitutional disturbance of the circulation and nervous system.

This aggregation of symptoms accompany the passage of a renal calculus, or kidney stone, from the pelvis of the kidney into the ureter or through it into the bladder.

The pain commences as soon as the stone enters the ureter, and does not cease until it either falls back into the pelvis of the kidney or is forced by the accumulation of urine behind, aided by the contractions of the muscular fibers of the ureter, through the length of this tube into the bladder. Knowing this you can readily understand the special character of the accompanying pain, in that it commences suddenly and ends as quickly. This cycle of events is termed technically an attack of renal colic.

Remembering that there is a fair sized cavity at the renal end of the ureter, consisting of the pelvis of the kidney, and a very large cavity at the opposite end, in the shape of the bladder, you are prepared to understand how a stone or a shred of tubercular tissue, or a dense clot of blood, may, on the other hand, just enter the ureter and be displaced therefrom by some sudden movement of the patient. The renal colic caused by its impingment in the ureter suddenly ceases when it falls back into the pelvis.

As well can you understand how the attack of colic is far more severe and more prolonged if either of the foreign bodies mentioned is compelled to make the long transit through the entire ureter into the bladder, when the pain will also cease suddenly.

Such like attacks of colic will occur at intervals so long as calculi form in the calices of the kidney, and are displaced therefrom, and take up their journey to the bladder, as is the condition in quite a number of individuals.

Similar attacks may occur if there is present in any patient certain other pathological conditions of the kidney, such as tuberculosis, or cancer, or papilloma, etc. It is true also that calculous formations are very apt to be associated with these pathological conditions.

We find in this patient, that she was free from any return of the attack until eighteen months after the first manifestation described, since then she has suffered from them as often as once in every two or three months. Since the second attack, the urine has contained gravelly concretions of urinary salts, some of them of considerable size, as large as a kernel of wheat, or larger. The urine has shown the presence of pus and blood in some quantity; of late the pus has been present in large quantities.

The patient's general health has suffered very much, until now she is emaciated, weak and broken down in spirits and physical strength, and is practically a confirmed invalid.

Some time ago her attending physician, while making an examination of the painful region during an attack of colic, discovered a tumor occupying the situation of the left kidney, and now you can see this tumor, showing as a slight projection of the abdominal walls on the left side over the neighborhood of the kidney. It is quite easy to feel it with the fingers of one hand pressed against the tissues between the last rib and the crest of the ilium, while the other hand is pressed against the front of the abdominal walls.

It is slightly movable, semi-elastic, smooth and even of surface, and is the left kidney distended with fluid of some kind. Probably the fluid is pus, as such a large quantity of this material is found in the urine, and its presence is due to infection with the pus microbe through the genito-urinary tract.

It is my belief also, that there is present one or more calculi, and this is based upon the fact that so many calculous concretions have been passed in the urine, as well as upon the fact that renal calculi are very sure, sooner or later, to be accompanied by an accumulation of pus through infection.

It is scarcely possible that this will prove to be a kidney affected with tuberculosis either with or without a stone, because it is unusual to have no other manifestations of the tubercular infection than is present in this one kidney, besides the bacillus of tuberculosis has not been found.

The diagnosis in this case is renal calculus with suppurating kidney.

It is, as well, certain to me that the substance and capsule of the kidney is intact, because had destruction of these taken place by ulceration or tissue necrosis, a peri-nephritic abscess would have formed, with the usual signs of accumulation in and bulging of this space between the rib and ilium.

A few days ago, we had occasion to direct you that whenever a patient came under your charge suffering from indications of bladder disease, never to think your examination is complete until a sound has carefully searched every portion of the blad-

der cavity. In this case we have an additional caution to give: never to be satisfied with an examination of a case of disease of the genito-urinary apparatus, without a rigorous inquiry into the condition of the kidneys, by resorting to inspection and palpation of the organs themselves, as well as their entire neighborhood, just as carefully as you would examine their secretions microscopically, and by all known tests, for evidence of change from normal condition.

In all these operations the primary incision to expose the kidney is made in exactly the same way, and all the steps will be illustrated to you upon this patient; and as we will no doubt find a calculus and remove it—this will be a nephro-lithotomy.

The direction is given, in order to make the diagnosis in such cases absolute, to sound the kidney by means of an exploring needle carried into the substance of the kidney, with the hope of having it come in contact with the stone—to strike the stone as it is termed—a very positive confirmation, if it can be elicited. It is even advised to go so far as to introduce the needle into the organ in several different directions for this purpose; and the trial has often been made before the primary incision uncovers the kidney, but of course oftener with failure than with success attending its practice.

Even after the kidney is to be seen at the bottom of the external wound, the exploring needle, or the probe, or even the finger introduced into the pelvis of the kidney or through its substance, sometimes fails to find the calculus; especially when it is small and hidden in an expanded calyx. Consequently you are not to conclude hastily that there is no stone present if this test fails even when the kidney itself is under inspection; certainly not, if the trial does not determine its presence when the instrument is introduced without an incision.

Given pointed and unmistakable evidence of the foreign body, as indicated by the occurrence of repeated attacks of renal colic,—with deep-seated and continuous pain referred to one kidney—with pus or blood or both, in the urine, even in comparatively small quantities, yet constantly discoverable; with the history of the passage of concretions of urinary salts; certainly if several, or all, of these signs are present in a marked degree, the surgeon is justified in exposing the kidney and incising its walls freely, in order that the pelvis can be explored in all directions and portions, by the finger—truly the only reliable probe.

It is true that even this crucial procedure sometimes fails to bring forth the calculus or to discover its presence. The kidney has been exposed a number of times and the pelvis explored without finding a stone. The renowned Mr. Henry Morris, of England, relates a case in which failure followed his search, but, so well convinced was he of the presence of the foreign body, on account of the marked symptoms of his patient, that he proceeded to do a nephrectomy and found the stone in one of the calices of the kidney after the organ had been removed from the body. Mr. Morris was among the first, if not the first, to diagnose the presence of a stone in the human kidney and to deliberately plan, and successfully execute, an operation for its removal.

It has happened to me to fail to find a calculus on two occasions. In one a large calculus had been removed from the other kidney a year previously; in the other it seemed certain that the stone was lodged low down in the ureter. We may be able to get at it yet.

If an operation is done merely to expose the kidney and incise it, the operation is termed a nephrotomy. If, in addition, the operation is done to remove a calculus from the kidney, it is termed nephro-lithotomy. If the operation is to relieve the distressing symptoms due to the extreme mobility of the organ, called a movable kidney, in which the organ is first exposed and then fastened in some way to the edges of the wound, it is termed a nephrorraphy. If the operation is done to remove the entire kidney through the tissues of the back, it is termed lumbar nephrectomy.

Prognosis.—The successful ending of the many operations already done and being done upon the kidney for a variety of diseases, is leading surgeons to the conclusion that the operations are not especially hazardous. My own experience, embracing all the operations performed upon this organ, and including several repetitions of some of them, points in the same direction. There has been but one death, and that followed the most formidable of them—a nephrectomy for a greatly enlarged suppurating kidney. All of the operations short of nephrectomy have ended favorably and with rapid recovery. The simpler procedures of exposing and exploring the organ are not attended with much danger, if such rigorous aseptic precautions are taken as are recognized by every surgeon as necessary in all operations.

You understand that the incisions which we will make in this case, are exactly the same in every respect as those which are necessary for the execution of a nephrotomy, a nephrorraphy or a nephrectomy. The external incision should be about four inches in length, and made parallel with the last rib and fully half an inch below its lower border; commencing posteriorly, a little behind the prominent ridge marking the external border of the erector-spinæ muscle. The course of the incision should always be made as directed, at the distance mentioned below the border of the last rib, on account of the dangers of opening the pleural cavity in any case in which the pleura descends below that rib or in such cases as there is present a supernumerary rib, or in which one rib is absent, and the normal relations of the pleura thereby altered.

The patient should be placed in the position here illustrated, on the sound side, with a tightly-rolled pillow, covered with an oil-cloth having an aseptic towel over it, placed under the opposite loin; thus the side to be operated upon will be made very prominent, and the interval between the rib and the crest of the ilium increased to its fullest extent.

The first incision should be carried with a free hand through all the tissues and fasciæ down to the anterior layer lumbar fascia. The length of the incision through the deep tissues being the same as that through the skin. The operator should avoid opening the sheath of the erector-spinæ muscle. All bleeding vessels are secured.

The anterior layer of the lumbar fascia is then opened and divided to the extent of the wound. As soon as this is done, there will bulge into this opening, the peri-nephritic tissue in which the kidney rests. Its investing connective tissue should be opened and the operator will then readily recognize the peculiar white fat surrounding this organ. A portion of this fat may be pulled out and snipped away, or its spaces opened and torn by the fingers, as you now see me do, after which the kidney can be readily felt by the finger or seen with the eye, as a darkish red body, moving slowly up and down with each respiratory act.

If the kidney is not now easily found, as is frequently the case if it is not enlarged to any extent, it can be brought into view sometimes by a simple procedure. An assistant introduces two fingers into the wound and pulls strongly upward against the last rib. This widens the wound and at the same time stretches the peri nephritic tissues towards the wound. The assistant with his disengaged hand should also press strongly backwards through the anterior abdominal walls over the region of the kidney, thus pushing it into the wound.

The space for operative manipulations, in cases of enlarged kidney, can be greatly increased, and with safety, by a vertical incision commencing in the one already made, and carried downwards towards, and forward parallel with, and close to the crest of the ilium. With the finger deep in the wound as a guide, this latter incision can be rapidly made without danger of opening the peritoneum.

It was used upon one occasion successfully by myself in the removal of a kidney enlarged to the size of a cocoanut; and made a space large enough for all the necessary manipulations without difficulty.

After the kidney is exposed in the manner described and brought fairly under the touch of the finger and the sight of the eye, by the removal of its investing fat, the next step will depend upon the operation which is being performed.

In this case the object is to remove a stone from the kidney and evacuate what other accumulations may be present. So we will now first introduce the finger into the wound and palpate the kidney over its anterior and posterior surfaces, reaching as far beyond the pelvis as possible in both directions.

The best command of the kidney can be obtained in these cases, by the finger passed over its posterior surface. The finger used in this way will sometimes detect the stone in the kidney, or determine a noticeable bulging and hardness in some portion of its surface which may indicate its presence.

(*To be concluded.*)

MEDICAL PROGRESS.

Therapeutics and Pharmacology.

REMARKS ON LAPAROTOMY FOR PERITONEAL TUBERCULOSIS. — LAUENSTEIN (*Centralblatt für Chirurgie*) thinks that it is remarkable that the usefulness of this operation should have been accidentally discovered, and that it should have been practiced empirically to the extent which it has. He would refer the good effects to two facts in the life history of the bacillus: it requires moisture, and is rapidly killed, even by a few minutes' exposure to the direct rays of the sun. He thinks that both of these factors may explain some of the good effects. In operating he allows the direct rays of the sun to fall upon the abdomen and its contents. Of course, the operation relieves the ascites always present in these cases, and so lessens the amount of fluid surrounding the tubercular process.

EFFECT OF STRYCHNINE ON THE CEREBRAL CORTEX.—For years strychnine has been used in certain convulsive disorders, especially epilepsy, not only alone but as an ingredient in several popular formulas. Its value has been questioned by many, but it has been held to be of use by several eminent clinicians.

Recently BIERNACKI (*Therap. Monatshefte*, August, 1890) by his experiments has thrown considerable light on the action of this drug. The first of these experiments related to the action of the drug when given hypodermically. The animal was first trephined, and after waiting for the normal excitability to return, a dose of strychnia was given. It was found that a current which would produce violent tetanic spasms, would under strychnia be reduced to a faint tremor. The degree of reduction was directly dependent upon the dose employed. A second series of experiments was made, in which the strychnia was directly applied to the cortex. At first marked contraction of the vessels was produced, which soon passed off. The effect on electrical excita-

bility was the same as when the drug was injected under the skin. Compared with cocaine or morphine, when directly applied to the cortex, the effect of strychnia is very slow, it taking from twenty-seven to thirty minutes for its action to appear, and in each instance symptoms of spinal irritation appeared before the depressing effects of the strychnia. From these facts the author argues that strychnia does not directly depress cortical activity, but only indirectly by stimulating the action of the cord.

Certainly the observations are of interest, as they furnish an objective basis for a treatment that has been heretofore employed empirically.

GALACTORRHŒA.—BRAUN (*L'Union Médicale*) recommends in excessive secretion of milk the application of a compressing bandage to the breasts, low diet, interdiction of beer, derivation to the intestine by means of a saline purgative. In case these measures prove ineffective the following mixture may be given:

℞. Iodide of potassium, 2.
Syrup raspberry, 20.
Distilled water, 100.
Sig. A tablespoonful three times daily.

QUININE IN SEA SICKNESS.—RICHERT has recommended large doses of sulphate of quinine as a specific in seasickness. Recently one of his pupils has written him a letter (Marcel Boudovin, *Le Progrès Médical*) in which he notes the utter inefficacy of this treatment in his own case. It is to be noted, however, that Boudovin did not follow strictly the injunctions of the teacher to remain as quiet as possible in the recumbent position.

SANTONINOXIME.—This is the name of a substance prepared by M. CANNIZZARO (*Jour. de Méd. de Paris*) by the action of chlorhydrate of hydroxylamine on santonine. Santoninoxime is a white crystalline substance, soluble in alcohol and ether, but dissolving in water, whether acid or alkaline, with difficulty. C. M. Coppola has found that this substance possesses the same action in the intestine as santonine, but owing to its lessened solubility it is much less poisonous, and it should therefore be preferred to the santonine. Its dose as an anthelmintic is three times as large as that of santonine.

Medicine.

PRURITUS ESSENTIALIS.—FEINBERG (*Centralblatt für Gynækologie*) describes two cases of idiopathic pruritus.

On the 1st of April, 1888, F. was consulted by a young woman, who requested that she might be given a certificate, to the effect that she was not affected with any venereal disease. The woman had been married two months, and was suffering from an intense pruritus of the external genitals and adjacent parts. The itching caused intense mental depression. It appeared to be connected with menstruation, coming on a day or two before, and disappearing a couple of days after each period. An examination showed a pale mucosa, with abundant marks of old and recent excoriations on the external genitals. The deep mucosa was in consistence and general appearance normal, but very sensitive to the touch (hyperæsthetic). The author having excluded all other causes came to the conclusion that he had to deal with a purely nervous disturbance. He prescribed bromide of potassium internally with the application of a hot solution (1:4000) of corrosive sublimate to the external genitals. The patient improved, and he saw nothing of her until eleven months later, when he was again called and found a frightful pruritus that had extended from the pudendum almost over the entire body. This had come on during delivery; after a few days it subsided and not again return.

A second case was that of a multipara who for the past two years had suffered from vaginal pruritus during menstruation. During an abortion the pruritus had extended over the body, but it ceased as soon as the fœtus was expelled. In consequence of a severe mental emotion she was taken with uterine hæmorrhage, which was followed by a severe general pruritus. Feinberg found the patient sitting on the side of the bed in great agitation, scratching first one portion of the body and then another, convinced that an abortion was about to take place.

The writer thinks that in these two cases, we have examples of nervous pruritus not dependent on secondary causes. This position is, however, negatived by some writers who thinks that pruritus essentialis has no existence.

ACUTE PURPURA.—ZANETTI (*Atti e Rendiconti della Academia Medico Chirurgica di Perugia*) reports the case of a woman 23 years of age, who had had pains in the lumbar region and buttocks, associated with slight cephalalgia for some time. Of late these symptoms had become worse, and at the time he saw the patient intense pain had developed in the sacral region, attended by considerable prostration, elevation of temperature, (38.4 C.) hæmatemesis, sub conjunctival hæmorrhages, punctiform hæmorrhages on the arms, buttocks and neck, lenticular hæmorrhages on the belly, genitals and inner surface of the thighs. The cutaneous hæmorrhages extended rapidly accompanied by hæmaturia and metrorrhagia, followed by death from syncope on the third day. The autopsy revealed extensive sub-peritoneal hæmorrhages with extravasation into the peritoneal cavity and ventricles of the brain, intestinal hæmorrhage, spleen slightly enlarged and friable, beginning fatty degeneration of the liver.

In the absence of all signs of poisoning and of general conditions capable of explaining the multiple hæmorrhages, the author arrives at the conclusion that the case is one of morbus maculosus Werloffi, notwithstanding that the course of this disease is ordinarily chronic, and the termination favorable.

CANCEROUS STRICTURES OF THE ŒSOPHAGUS.—The problem of feeding a patient in deep seated carcinomas of the œsophagus is very difficult; gastrostomy has been tried, but it is a delicate and dangerous operation, and one that can never in any way prove popular because it is not in any sense curative. The introduction of a permanent sound that shall keep the stricture dilated and through which the patient may be fed, has been attended with success. Recently an article in the *Lyon Médical*, (*Gazette Médicale de Liege*) favors the permanent sound, claiming that it is easily introduced if done sufficiently early. The writer of this article prefers the long, soft sound with stylet to the short, hard canulas recommended especially by some German writers. The chief dangers are from hæmorrhage and ulceration. The writer uses a long, soft sound that is brought out of the nose. At first it excites considerable reflex spasm and may cause vomiting, but the parts soon become accustomed to the foreign body, which then causes no further trouble.

Surgery.

BRAIN ABSCESS, APHASIA, OPERATION.—A. SÄNGER and C. SICK (*Deut. Med. Wochenschr. Centralblatt für Klin. Med.*) describe an interesting case of brain abscess with operation. A man 52 years of age, with left-sided chronic, purulent otitis media, had an exacerbation of his trouble—severe pain in the left ear and side of head, disturbance of the general health, pressure symptoms and disturbance of speech, characterized by forgetfulness of words and clumsiness of expression. The patient expressed his ideas frequently in writing. Later choked disc presented itself, with left facial paresis. A diagnosis of circumscribed abscess in the left temporal lobe was made. An operation was performed, and by the exploratory puncture 1 drachm of thick pus was removed from the posterior third of the left frontal convolution. After the operation the patient's speech and general condition improved. At the end of a few months the patient was apparently as well as ever, with the exception of a slight weakness of memory.

SUBACUTE CERVICAL ADENITIS OF INTESTINAL ORIGIN.—M. NICAISE (*Revue de Chirurgie*, September 10, 1890) last year attended a woman, aged 80, who suffered from a swelling in the right supraclavicular region. The skin was violaceous, tense at certain points, and on palpation obscure fluctuation could be felt. Pain was severe, and the arms could not be moved. The swelling had lasted for three months; it began during convalescence from severe enteritis, and the patient had never regained her former health. Three separate lymphatic glands had first been affected, and they had slowly increased till they formed one tumor. At first the disease looked like simple degeneration of the glands, and it was long before any fluctuation could be felt. An exploratory puncture was made, and pus exuded, confirming M. Nicaise's diagnosis of suppurative adenitis. Then an incision was made. The pus was thick; the cavity whence it issued was tortuous. A counter-opening was made, the cavity was washed out with an antiseptic solution and drained, and covered with antiseptic dressings. Cicatrization was very rapid, although the patient was so old, and she regained her health as before the enteritis. The adenitis seemed to be a kind of critical phenomenon which freed the organism from the poison with which it had been infected in the course of the intestinal disease. Chronic adenitis of the cervical glands is not rare in old age; any other disease predisposes them to inflammation. Troisier has already pointed out that enlargements of the cervical glands are sometimes observed in cases of cancer of one of the abdominal viscera, and M Nicaise has diagnosed the latter condition through the presence of enlarged lymphatics in the neck.—*Brit. Med. Jour.*

Obstetrics and Diseases of Women.

IMMEDIATE REPAIR OF THE PERINEUM.—T. H. HANCE, M.D., in a paper read before the New York Academy of Medicine, advocated the immediate repair of injuries to the pelvic floor, where the laceration had not extended through into the rectum, that is, in cases where there was either a clean cut through the perineum, or through the skin and perineum to one side or other of the median line. In those cases where the posterior vaginal wall had been ruptured without laceration of the skin, the operation also offered good results. He thinks that there ought to be no difficulty in recognizing these incomplete lacerations at or just before delivery (by digital examination) thus gaining time to make preparations to repair them at once. He introduces the first suture high up in the vagina above the tear, in order to avoid the formation of pockets; he also thinks that this method offers the best results for the restoration of the pelvic floor. If the laceration has extended up on both sides, they are to be repaired separately. The patient's legs are kept tied together for twenty-four hours after the operation, and the bowels are moved on the third day. He says that two points ought to be closely observed in order to insure success, that is the careful adaptation of the lips of the wound, numbering the sutures to individual requirements; and secondly, the observance of strict antiseptic pre-

cautions, including the use of antiseptic douches before and after the operation, antiseptic pad, etc.

All members taking part in the discussion expressed themselves as in favor of immediate operation.—*Archives of Gynæcology.*

TREATMENT OF INOPERABLE UTERINE CARCINOMA WITH CHLORIDE OF ZINC.—HABERLIN (*Correspondenz-blatt für Schweizer Aerzte*) recommends the use of a paste composed of chloride of zinc. He agrees with Meyer, Schrœder and Leopold that the total extirpation of the carcinomatous uterus presents about all that is required for an operation both in its effectiveness and mortality, he also agrees with Leopold that in the cases in which we have a recurrence, the disease is milder and more easily endured. It is, however, in those cases in which the cancerous process has affected other organs and a certain amount of affected tissue must be left that it is well to study the effect of other remedies. He places the mortality of these cases at 20 per cent. or over. Kaltenbach claims that even where a considerable portion of the morbid growth is left an operation is still justified, as, by that means, the pain, discharge and itching are lessened, while sleep and appetite are improved, thus rendering life more endurable. The same result can be achieved by a less bloody and safer operation, which may be employed in cases in which total extirpation is out of the question.

The author gives the histories of five patients that amply attest the correctness of his views. They were all treated by the application of chloride of zinc paste, and in each case there was marked amelioration in the local symptoms and improvement in general health. In only one case did severe hæmorrhage follow, and that was one in which the patient was allowed to leave the clinic before cicatrization was complete. Discharges were greatly lessened in each case, and in some they ceased entirely.

Chloride of zinc has been used in the form of solution and as paste. A. Martin tried as early as 1879 the paste recommended by Labbé (chloride of zinc and starch, equal parts). Vohwinkel used a similar mixture composed of chloride of zinc four parts, farina three parts, oxide of zinc one part. Ely van de Warker in 1884 recommended solutions of 30 and 50 per cent. From the observations of Ehlers it is clear that the proper localization of the remedy is very difficult if it is in solution. For these reasons the writer has confined his experience to the use of a paste which is made by rubbing equal parts of chloride of zinc with a small quantity of water. A quantity corresponding to the defect to be treated is placed upon a cotton tampon, and carried into the cervix. To fix the tampon and protect the vagina iodoform gauze is placed about the cervix. The time that the tampon is allowed to remain varies according to the reaction; after it is removed the vagina is irrigated with an antiseptic solution. The technic of the operation is of the simplest.

What is the danger of this operation? A. Martin has observed cauterization of the bladder, rectum and perforation of the peritoneum; one patient died from hæmorrhage. The author's patients have for the most part borne the operation well, notwithstanding the cauterizations have been very energetic; it is naturally difficult to determine just how deep to go; but they have been governed to some extent by the amount of pain produced; if greater than could be overcome by an injection of 0.01 of muriate of morphia, the tampon is removed, when if it is found that the action has not been sufficient, it is again renewed.

Five to eight days after the application of the paste, a thick (5 mm.) eschar separates, leaving a granulating surface that bleeds, when touched, but not spontaneously. While the theory of Van de Warker that zinc chloride has a specific action, in that it coagulates carcinomatous tissue, and produces an inflammation in normal tissue, has been negatived by Ehlers, yet it is equally true that it is the very best cauterant that can be used, as no other produces so perfect an eschar.

The writer closes with the following sentences: "In cases of carcinoma where all of the diseased tissue cannot be removed the hope of improvement is very slight as compared with the dangers of the operation. My own cases, while few in number, prove that we have a simpler and less dangerous method in these doubtful and certainly inoperable cases, from which the most favorable results may be expected. While we exclude total extirpation as a palliative measure, we must not stand with our hands in our laps, but begin a careful palliative treatment in the use of chloride of zinc that is capable of giving to these patients many comfortable days, even when the circumstances are relatively unfavorable."

Ophthalmology.

A CASE OF DOUBLE-SIDED HÆMIANOPSIA.—FÖRSTER (*Jahres-Bericht der Schlesischen Gesellschaft für vaterländische Culture*, 1890) describes the case of a postal secretary who had suffered from right hæmianopsia for four years without any disturbance of the general health. The dividing line between the defective and functionary halves of the visual fields was in a vertical meridian, though it deviated about 2° toward the right or affected side. The patient had continued his occupation notwithstanding the visual defect, but in August, 1889, he, in the course of three days, lost vision in the left half of the field, also without any disturbance of the general health. In November the patient when moving presented the appearance of one totally blind. Examination showed a visual field of 3° horizontal and 2° ver-

tical, at the fixed point, with acuity of vision about one-third. Four months after the second attack the papilla optica did not present a trace of atrophy. Optical memory was good, though the color sense was completely absent, as was the ability to grasp or reproduce topographical conditions (*topographische Vorstellungen*)—this last defect was so great that the patient after some weeks was not orientated in his own room; further, he was unable to reproduce the boundaries of countries or the routes that he had frequently traveled. The author regards the condition as due to a thrombus of the cortical vessels. The deviation of the dividing line towards the defective side which is often observed in hæmian opsia, he attributes not to a mixing of the nerve elements at the fixation point, but to a richer blood supply in the cortex corresponding to the greatest acuity of vision. The case further teaches that in the occipital lobe we have the seat of the topographical remembrance and not that of visual memory.

THE CORROSIVE-SUBLIMATE TREATMENT OF GRANULAR CONJUNCTIVITIS.—The treatment of different forms of granular conjunctivitis with various strengths of corrosive sublimate solution seems to have given good results in the hands of Guaita (*Annales d'oculistique*). The details of the treatment are published in the *Union Médicale*. The sublimate is used in strengths of from 1 to 300 to 1 to 500, and is applied to the palpebral conjunctiva with a camel's-hair brush every two hours, or according to the severity of the case. If the disease is slight, a collyrium of 1 to 1,000 is given. There have been no symptoms of poisoning or complications to the cornea from this method, but very prompt amelioration of the symptoms has followed its employment in every instance.—*N. Y. Med. Journal.*

Physiology.

INVESTIGATION ON THE SENSE OF TASTE.—OEHRWALL (*Skandin. Arch. f. Physiol*, II, p. 1, 1890) like other observers, recognizes four kinds of taste, namely, sweet, saline, bitter and acid. There does not seem to be any transition between these four varieties, so that the author regards the differences between them as those of modality, and not as qualitative differences of one sense. When cocaine was applied to the tip of the tongue the sensibility for adequate stimuli, that is, sapid bodies, disappeared, and even the elec trical current failed to excite a sensation of taste. It is remarkable, however, that there remained only a sensation of heat or cold. The chief part of the communication deals with punctiform stimulation of the individual papillæ by means of fine brushes. There are marked functional differences amongst the papillæ. The fungiform papillæ are excessively sensitive to tactile, thermal, and cold impressions, so that by simply touching one such papilla a very complex sensation results, first that of contact, nearly simultaneously cold, and then the taste sensation follows. Electrical stimulation may excite acid or other tastes. Goldscheider and Schmidt have also investigated this subject (*Centralblatt f. Physiol.*, vol. iv. No. 1, 1890). They find that certain parts lying between the papillæ do not excite the sensation of taste, and that the several papillæ are not all equally capable of exciting the several tastes. In many individuals the taste of "sweet" alone is developed near the middle line on the hard and soft palate. Acid tastes are less developed in the circumvallate papillæ than on the anterior part of the tongue. At the anterior part of the tongue only the tip and sides seem to excite taste. The so-called alkaline taste excited by a constant current seems to be a composite result, due to a mixture of bitter and saline tastes with stimulation of sensory nerves as well. Between the papillæ there is never any sensation of taste. It is possible to fatigue the papillæ for one taste, for example, the circumvallate papillæ may, by repeated application of quinine, cease to detect bitter, while still capable of responding to sweet substances. Stimulation with acid, however, diminishes the excitability for all stimuli. It would seem from these researches that there are four different kinds of gustatory sensations—bitter, saline, acid, and sweet; that each seems to be related to a special form of peripheral end organ, and that the papillæ are supplied in different proportions with these several fibres or nerve endings, so that it appears that the doctrine of the specific energy of nerves is also applicable to the sense of taste.—*British Medical Journal.*

Bacteriology.

PASTEUR INSTITUTE OF PARIS.—In the October 19 issue of the *Journal de Médicine de Paris*, three deaths were reported to have taken place after the preventive inoculation.

On the 6th of September last, in Ille sur-la-Tet, arrondisement of Prades, a mad dog bit Jean Domenech, 7 years of age, and Sebastian Vidalon, aged 46 years, the last having had his lips and part of his face torn away by the fangs of the enraged animal. The department sent both patients to the Pasteur Institute, where they were treated, and returned home apparently well. A letter from Perpignan under the date of October 10 states that both unfortunate victims had died after the most atrocious suffering.

A little citizen of Guyotville, 14 years of age, had been at the Institute for one month in consequence of a bite received September 8. He died the morning of the 12th of October, after a night of horrible suffering. The wound had not been cauterized, and the boy presented himself for treatment five days after receiving the bite.

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SATURDAY, JANUARY 10, 1891.

THE SURGICAL TREATMENT OF LARYNGEAL TUBERCULOSIS.

Surgical intervention in certain cases of tuberculosis of the larynx marks an epoch in laryngology. When HERYNG, of Warsaw, and KRAUSE, of Berlin, first promulgated their methods and results, laryngologists were generally skeptical. They bethought themselves of the numerous instances of conjoined laryngeal and advanced pulmonary tuberculosis in whom to scrape and inject, to cut and cauterize, seemed unnecessary and even cruel.

But other, more sthenic cases exist, with whom the lungs are "not appreciably" or but slightly infiltrated, without fever and cachexia—patients otherwise capable of resisting the attack of the bacillary monster, at least for years, but for a laryngeal complication.

At times the deposit of tubercular foci excites the laryngeal epithelium to proliferative activity, producing mammillated or villous neoplastoid projections, which cover by preference the inter-arytenoid region, but which may extend to other parts of the larynx, and so encroach upon its lumen as to present a choice only between intralaryngeal surgical intervention, tracheotomy, or death hastened by *dyspnœa*. Again, tuberculous ulceration, especially of the epiglottis or arytenoid region, by rendering deglutition excruciatingly painful, may present the alternative only of surgical intervention to promote healthy cicatrization or death hastened by *dysphagia*. To these graver complications, dyspnœa and dysphagia may be added also *aphonia* as a third indication for the surgical method. Nor need the actual presence of such distressing states be awaited, but one should operate also in the early stages, on the principle of prophylaxis.

By "surgical treatment" is meant the removal of exudative and proliferative material by the curette, cutting forceps, or punch, and the *curettement* of tuberculous ulcerated areas, each followed by the application of lactic acid as a mild escharotic, which is believed to exert a specially favorable influence in promoting cicatrization. The mere application of lactic acid without previous preparation by incision or scraping of the part, is not conceded to be within the scope of the term "surgical," although a 60 to 100 per cent. lactic acid solution alone, may suffice when the ulcers are already well exposed.

The many papers and discussions before the Sections of Laryngology, respectively, of the Tenth International Medical Congress and the recent meeting of the British Medical Association, witness the importance of this subject. At Berlin, HERYNG, STÖRK and SCHEINMANN spoke favorably of the method, and KRAUSE exhibited cases apparently cured. At Birmingham, MR. CHARTERS J. SYMONDS, of Guy's Hospital, read the opening paper. He approached the subject from the standpoint of a surgeon having to deal largely with the eradication of tubercle from joints, bones, skin, etc., and while recognizing the greater difficulties surrounding operative interference in the larynx, parts of which are not readily accessible, he held that with skill, and the instruments now in use, these difficulties could be surmounted.

In opening the discussion DR. G. HUNTER MACKENZIE, whilst deprecating heroic measures in individuals with extensive pulmonary participation, advocated in suitable subjects, the surgical removal of papillomatous or exudative material and the stimulation of ulcers to more healthy action by lactic acid, menthol, or iodoform, although he asserted, from prolonged experimentation, that the action of these agents upon the bacilli was absolutely *nil*, and believed that they were not superior for the purpose to chloride of zinc, carbolic acid, and other materials. MR. LENNOX BROWNE insisted that it was important to apply the lactic acid with some friction and that the surgical treatment was then ben-

eficial in cases of ulcerations and granulations peculiar to the chronic stage of this disease.

In estimating results it must not be forgotten that laryngeal disease in tuberculosis, may be tubercular, non-tubercular, or mixed. Such patients are prone to simple laryngitis, and non-tuberculous exudation and even superficial ulceration can ensue, which, of course, would readily heal. Further, that spontaneous cicatrization of real tuberculous ulcers has been observed.

But with all due allowance, the cases in which either material amelioration or a local cure has been induced by the observers mentioned, as well as by GOUGENHEIM and LUC, in France, justify the following conclusions:

That the surgical treatment of laryngeal tuberculosis may be advantageously undertaken:

1. In all cases in which there is little or no evidence of pulmonary disease.

2. In those accompanied by dyspnœa, dysphagia, aphonia, or severe cough, with existing but not rapidly advancing pulmonary participation.

That asthenic cases of conjoined laryngeal and advanced pulmonary tuberculosis ought not to be subjected to violent local treatment, but should receive only mildly stimulating and sedative applications in the form of sprays, powders or pigments.

CHLOROFORM VERSUS ETHER.

The report of the Hyderabad Commission on this subject is doubtless fresh in the minds of our readers. It will be remembered that the unanimous conclusion of the members of that body, after very elaborate investigation, was, that in death from chloroform respiration always ceased before any dangerous failure of the heart took place, and that its effects were precisely similar to those of ether, except that the dose of ether needed to be much larger. Naturally, a view of the subject so opposed to the opinions of a large proportion of the profession could not be expected to meet with immediate acceptance, and, as a matter of fact, it was quickly controverted in various quarters. An important contribution to the subject has just been made by DR. J. A. MCWILLIAMS, in a report to the Scientific Grants Committee of the British Medical Association, published in the *British Medical Journal*, which goes far to show that the conclusions of the Hyderabad Commission are not applicable to all animals, and that there is some ground for the belief, heretofore widely held, that chloroform has, in some cases, a pernicious influence on the heart that is not shared by ether.

Dr. McWilliams began his experiments in 1888, at a period, therefore, long before the report of the Commission, and continued them at intervals down to a recent time. The animals employed were principally cats, and the aim of the investigation was specially to observe directly the effects of the drugs upon the heart. For this purpose, the chest was opened, under suitable precautions against hæmorrhage, and an automatic recording apparatus attached to the heart, artificial respiration and the administration of the anæsthetic being effected by means of a bellows connected with a canula inserted in the trachea. By this means, it was possible to watch the action of the heart during the experiments, while the circulation went on undisturbed, except for the effects of the drugs administered. It was found that dilatation of all the cavities of the heart frequently occurred under the influence of chloroform, at an early period, in many cases before the cornea became insensible, and without interference with the regularity of the heart's action. This was usually associated with a fall of blood-pressure, but bore no constant relation to it. In some cases a periodical depression of the ventricular action was also noticed. Neither of these effects was observed from the administration of ether, even when pushed to the extent of completely abolishing the conjunctival reflex. In many cases the drugs were repeatedly administered, alternately to the same animal, with the result that dilatation of the heart uniformly took place under chloroform, and was as uniformly absent, with an equal or greater degree of anæsthesia, when ether was used.

To meet the objection that these results might be in some way due to the opening of the chest, chloroform was, in a number of cases, given in the ordinary way, and the chest quickly opened, when the heart was found dilated, as in the other experiments.

In three cases cats became suddenly collapsed during the administration of chloroform preliminary to the insertion of the canula, while natural

respiration was going on regularly and efficiently. The pulse was found, in each case, to be imperceptible, and, after respiration had gone on for some time, the heart was found, in each case, on opening the chest, to be contracting so feebly as to be entirely ineffectual in propelling the blood. All the animals were resuscitated by rhythmic compression of the heart with the thumb and finger. As a general rule, however, in death by chloroform, respiration ceased before any such failure of the heart's action as to be incompatible with life.

It was found that, with a given proportion of chloroform in the inspired air, changes in the rapidity of respiration had a marked effect upon its absorption. An amount of chloroform that could be given with safety during quiet respiration, speedily produced alarming symptoms when respiration became rapid and deep.

The most effectual way of increasing the blood-pressure in the carotid, when it had fallen to a dangerous degree, was found to be firm compression of the abdominal aorta.

The practical bearing of these facts is obvious. The value of such investigations as those that led to their discovery is equally so. Among the thoughts which they suggest is the question how soon such researches will be carried on with funds contributed by the American Medical Association.

KOCH AND HIS CRITICS.

In the blame which has, in various quarters, been freely bestowed on the man who is, just at present, the most prominent figure in the medical profession, for not at once making all the details of his discovery public, the important circumstance has been ignored that he does not seem to have been altogether a free agent in the matter.

DR. KOCH is a salaried officer of the German government. The Hygienic Laboratory, in which his researches have been carried on, is supported by public funds, and the investigations themselves were a part of the work for which he is paid. Under such circumstances, it would not be merely politic, but eminently fitting, that, as long as he retains his office, he should pay a good deal of regard to the wishes of his official superiors. There have been reports that it was in deference to pressure from that quarter, and against his own judgment, that he made his announcement in the International Medical Congress. However that may be, the Minister of Public Instruction, GOSSLER, stated, in reply to an enquiry made of him in the Prussian Diet, that Koch's wish was to publish all the details, but that, on account of the difficulty of preparation of the remedy, and the harm that might result from the use of imperfect and irresponsible imitations, he had prevailed upon Koch to defer publication of its nature, a step for which he assumed the entire responsibility.

Of the necessity of such a course probably no one can be a competent judge who is not acquainted with all the reasons which led to the decision. No one can doubt that if the method of preparing the remedy were made public, the markets of the world would soon be flooded with the products of competing manufacturers, some of whom might not be able, with the best disposition in the world, to judge as to the quality of their wares. The tests which have been made of various brands of pepsin may serve as an illustration of the varying quality of articles going under the same name. It is of the utmost importance that the remedy shall be tested in such a way as shall be conclusive in regard to its value, and the gratification of a legitimate curiosity is of very little moment in comparison. Whatever may be thought of the reasons for secrecy in this case, the responsibility for it should be placed where it belongs, and that is evidently not with Dr. Koch, but with his superior officer.

IMPORTANT PRELIMINARY WORK.

But four months intervene before the Annual Meeting of the Association at Washington. Those most interested in its welfare need not to be advised that the value of these annual meetings lies not so much in the work accomplished in General Sessions as in that which is done in the Sections. By the quality of Sectional work the real value of the Association must be estimated. By this its future success or failure will be assured.

The Association is especially fortunate in the selection of its officers which are to supervise the work in the various Sections for the coming year. In each department men of ability, and whose work in the past is a guarantee of success, are in

command. To these we look for that thorough preliminary preparation which is absolutely essential. To this end THE JOURNAL will venture a few brief suggestions:

1. To determine as nearly as may be the number of papers which can be properly presented and discussed in a given Section during the several sessions of the Annual Meeting. 2. That men specially qualified for the work be secured in sufficient number to prepare the papers which shall meet this requirement. 3. That the attention of each writer be called to the fact, that papers submitted to the Sections become the property of the Association for its exclusive use, and are not at the option of the writers, for publication elsewhere. 4. That all papers be fully completed when they are presented, and pass immediately from the readers to the Secretaries of the Section in which they are read.

The papers thus prepared and submitted will determine the value of the "Original" department of THE JOURNAL to its readers for the coming year. By these papers the status of our Association is justly to be adjudged not only by the profession at home, but also in other lands. We know that those upon whom the responsibilities rest are fully equal to their work, and we confidently anticipate that the programme for the present year will exceed any one that has gone before.

SHALL "THE JOURNAL" BE REMOVED TO WASHINGTON?

Thus far but a limited number of replies to this question have been received. It seems desirable that the reasons for and against such a movement should be fully stated. If possible the wishes of the entire membership should be known, and in the settlement of the question, the will of the majority should govern.

If possible the question should be promptly and permanently decided at the next Annual Meeting, and in such manner as not to divert the attention of the members from the important work in the Sections, nor trench upon the time allotted to them.

The views of the members upon this question should have full expression before the Annual Meeting, and with positive conviction upon that subject it need not require any considerable time to come to definite conclusions.

In the meantime let the reasons for and against removal be carefully considered, and in the order in which they may be forwarded for publication THE JOURNAL will present them to its readers.

EDITORIAL NOTES.

A COMING VACANCY IN THE U. S. A. MEDICAL DEPARTMENT.—The single colonel of staff who retires in 1891, by reason of age limitation, is Dr. Edward P. Vollum, who is stationed in New York City, and acting chief medical purveyor, pending the Senate's confirmation of his appointment last August. He was candidate for the surgeon-generalship after Dr. Baxter's death. He is a New York man with a long, active record, and is at present president of the Army Medical Board in that city. His original commission is dated May 12, 1862. He retires on September 11.

FORTY-FIVE DAYS OF FASTING.—Succi had rendered himself famous in London by a fast of forty days, which he completed in May last. Later he came to America. On November 15 he commenced a fast of forty-five days, in New York City, completing the same December 20. At the commencement of the fast his weight was 147¼ lbs., at the end of the forty-five days he had lost 42½ lbs., or nearly one pound for each day. At the conclusion, the final medical examination, his condition is reported as follows: temperature normal; pulse 62; respiration 90 (?); dynamometer 44; tongue clear, moist and steady; general condition weak; urine eight ounces in twenty-four hours; specific gravity 1.022; reaction acid, clear. Of drinks during the forty-five days he took 291 ounces of croton water; 799 ounces of mineral water, and 64 ounces of ice. Of his elixir, which is composed of morphia, canabis indica, chloroform, sulphuric ether and alcohol, he took during that time 710 drops. His sufferings during the last few days were intense, and when the forty-five days were ended he had reached the limit of his endurance.

UNOSTENTATIOUS CHARITY.—A resident of Lowell, Mass., whose name is withheld, has pledged $25,000 towards the new free hospital to be established there. A board of officers was elected on the 29th ult.

DEATH FOLLOWING INOCULATION FOR LUPUS.—According to the *Wiener Klinische Wochen-*

schrift, a girl 17 years of age died after an injection of two milligrams of Koch's lymph. The injection was made at 9 A.M.; at 3 P.M. the characteristic appearances were observed upon the affected portion of the face. The local manifestations were more and more pronounced. The bright red zone became more and more livid; dyspnœa and heart failure ensued and the patient died thirty-six hours after the injection.

DR. MILAN BAKER, a graduate in 1855, of the Medical Department, University, Buffalo, N. Y., and an original member of the New York State Medical Association, died at his home in Buffalo, December 29th last, aged 62 years. He was a member of the original commission which located the State asylums for the insane, and at the time of his death was one of the managers of the State insane hospital in Buffalo.

SPURIOUS KOCH'S FLUID.—It is already reported that spurious Koch's fluid is being manufactured in Berlin, and that medical men are being deceived in their effort to secure the genuine article. There hardly seems a limit to the deceptions which will doubtless be attempted in this direction, and the medical profession will need to be everywhere on the alert to protect the people from the evil to be averted, and from the frauds which unprincipled venders may seek to perpetrate.

QUARANTINE AGAINST CHOLERA.—The suggestions of Dr. J. H. Rauch, Secretary of the Illinois State Board of Health, upon this subject are timely, and should receive most careful consideration. He predicts a serious invasion of cholera, unless efficient quarantine regulations are adopted. In Abyssinia 10,000 people have died of cholera during the last six months. In India it is epidemic. It is not yet extinct in Spain. In the Asiatic provinces of Russia, in Corea and Japan, 80,000 people have recently died of this disease, and he urges that our Pacific coast be especially subject to the strictest of quarantine supervision.

UNWARRANTABLE JEALOUSY.—It seems incredible that such an intensity of hatred should be manifested on the part of German physicians as that they should seek to prevent so eminent a man as Morell Mackenzie from obtaining a reasonable supply of Koch's fluid for the purpose of testing its alleged virtues. Medicine and the alleviation of human ills are supremely above the petty differences and jealousies of men, and the effort thus to control the use of the lymph for the gratification of petty or personal spite, is unworthy of the most degenerate member of the profession, either in Germany or elsewhere. For the good name of the profession in Berlin we sincerely hope that the charge is totally untrue.

DR. CHARCOT, who has recently finished a long series of experiments with hypnotism, gives as his opinion that not more than one person in 100,000 would be likely to be benefited by this mode of treatment.

DR. ERNEST HARDY.—*Le Progrès Médical* of September 27 contains an account of the death of this eminent scientist. He was a member of several important medical and scientific bodies and contributed many important monographs, especially those upon the physiological actions of jaborandi and strophanthus.

"CONFRATERNITE."—Under this heading *Le Progrès Médical* describes an incident occurring in the town of Fehraltorf. A citizen of the place having trouble with his foot, three physicians were called in who decided that an amputation was necessary; a Doctor Ries undertook to cure the foot without an operation, and the patient dying, he wrote upon the death certificate, "Dead from the bad treatment of the physicians." He further declared that his colleagues were ignorant of surgery. For this and the monumental death certificate he was compelled to pay 1,200 francs damages. It is only in this latter part that they do these things better in France.

THE GERMAN GOVERNMENT AND KOCH'S MATERIAL.—After going to press we received the following cable from Dr. Harold Ernst, in Berlin, under date of December 10: "The secret of making Koch's material has been turned over to, and kept by the German Government only until a thorough trial can be made. The effect in lupus and surgical tuberculosis is most striking, because the results can be seen. The most wonderful property is the selective affinity for tuberculous nidus, often making latent centres active. Pulmonary tuberculosis will have to be under observation for a long time still before permanent result is determined. The action of the material is certainly as wonderful as that of any known medicine.—*Boston Med. and Surg. Journal.*

TOPICS OF THE WEEK.

RESEARCHES ON MALARIA.

So much importance is now attached to the action of bacteria upon the system in the production of disease, that we need not apologize for placing before our readers the results of the researches of Dr. Bernardo Schiavuzzi on malaria in Pola, which seem to have culminated in the discovery of one at least of the microörganisms that are capable of inducing ague. Pola is an ancient city of Istria, on the east coast of the Adriatic, long decaying, but now again rising in importance as a naval station, built on chalk, on which is a stratum of red earth, about 9 feet thick, which is of submarine volcanic origin, and was cast up in the miocene period. Its isotherm is 14.17° C., with wide extremes, its yearly rainfall amounts to 937 mm., whilst its physical conditions are favorable to the development of malarial fevers, which are endemic.

In the year 1866, Dr. Salisbury believed he had discovered the cause of malaria in an alga of the group of palmella, to which he gave the name of "palmella gemiasma," and which he had found in some of the marshy districts of Ohio. In 1869, Balestra examined the waters of the Pontine marshes, and satisfied himself that an alga which he named "alga miasmatica," and which was either an œdogonium or a cladophora, was the active agent in producing ague. Salisbury grounded his belief on the circumstance that a young and healthy couple sleeping in a room with a few boxes containing this alga were attacked with malaria, whilst Balestra induced an attack in himself by smelling some water containing the alga miasmatica. Safford and Bartlett, Archer and Barzellini, severally called attention to the probability of various algæ being the active agent, but only on the ground that such algæ were abundant in malarial regions; and objections were raised to their statements when further investigations showed that in each instance the alga in question was abundantly present in perfectly healthy regions. In 1873 Griffini injected into the veins of dogs and rabbits the dew which he had collected in marshy grounds and paddy fields; but though the temperature of the animals rose a degree or two, the spleen remained unaffected, and health was soon restored. Lanzi and Ferrigi were led from their inquiries to think that the malarial poison was the product of some kind of vegetable decomposition; and experimenting with the mud of the marshy districts of Ostia, which they injected into the vessels of guinea-pigs, they observed a rise of temperature to 40° C., enlargement of the spleen and liver, and the presence of pigment in these organs and in the blood. After the meeting of biologists in Kassel in 1878, Klebs and Corrado, and Tommasi-Crudeli examined by means of special apparatus the air, the water, the mud and the earth of the Campagna, and endeavored to cultivate the algæ naturally present. They obtained a great number of minute bacilli with fine fibres, small rounded granules like micrococci, and other microörganisms, which they carefully cultivated; whilst they at the same time made anatomical investigations on the size of the spleen in healthy white rabbits; then, having inoculated the animals, they arrived at the conclusion that they had discovered the malarial poison in a schizomycetous fungus, to which they gave the name of "bacillus malariæ." In 1880 Tommasi-Crudeli, Cuboni, and Marchiafava repeated and confirmed these observations, since they could produce an affection similar to or identical with the malarial fever with this bacillus, and because they found numerous similar bacilli together with roundish highly refractile granules or spores in the blood. The spores were contained in large numbers in the interior of the white corpuscles. They presented lively oscillating movements, and became more numerous, whilst the bacilli were fewer, as the temperature of the animal increased. In 1881 Laveran made a special study of the pigmental bodies which are found partly free in the blood plasma of malarial patients, and partly embedded in clumps of protoplasm or in white corpuscles, and arrived at the conviction that they were parasitical elements in various stages of development and decay.

Schiavuzzi's experiments extended over several years, and consisted in obtaining pure cultures of a bacillus, which he found abundantly present in the air of Pola, a place where malaria is endemic, and which agreed in its characters with that described by Klebbs and Tommasi-Crudeli. With this he infected rabbits, and in the memoir he has just published in Cohn's *Beiträge zur Biologie der Pflanzen* he gives charts of the temperature and figures copied from photographs of the bacilli he found in the animals. The bacillus is rarely present in the waters of the endemically affected district. It is aerobic, and develops on the surface of nutritive gelatine in the form of a whitish and tolerably resistent coat. Infection of this bacillus produced intermittent fever in tame white rabbits of the tertain and quotidian types, but without pernicious character in any case. It occasioned enlargement of the spleen and formation of the characteristic black pigment in the spleen and in the abdominal glands, and the blood corpuscles presented the changes shown by Marchiafava and Celli to be pathognomonic of malarial infection; whilst a development of bodies exactly resembling the spores of the bacillus took place in the blood. From all these circumstances Schiavuzzi and Tommasi-Crudeli, who fathered Schiavuzzi's memoir at the meeting of the Academy dei Lincei, entertain no doubt that the bacillus malariæ is the active agent in causing intermittent fever. The care with which these experiments were made is deserving of great credit. In each experiment the following details were attended to: The precise spot from which the air was obtained, with its height above the sea level; the date; the reading of the barometer and thermometer; the direction and strength of the wind; the relative moisture of the air, the actual amount of moisture it contained; the reading of the heliograph on the day when the specimen was obtained; the amount of ozone in the air; the rapidity of evaporation; and the temperature of the earth. The statements require confirmation; but the etiology of malaria may now be referred with tolerable certainty to the growth and development of a microörganism of vegetable origin in the system.—Editorial, *Lancet.*

MEDICAL CLASS IN JAPAN.

The following appears as an editorial in *The Sei-i-Kwai Medical Journal*, published monthly in Tokyo, Japan, under date of Nov. 22, 1890:

We may fairly divide the medical profession in Japan into four classes viz.: 1, *Kanpo-ka* (Chinese school), 2, *Kan-ran settû-ka* (China-Dutch school), 3, *Seiyo-ka* (European school), 4, *Senmon-ka* (specialist).

Those who belong to Chinese school are old in age, most of them over 50 years, and got the license by virtue of professional tradition from their forefathers; their knowledge consists of reading Chinese pseudo-physics; they have never seen the inside of human subject nor use any instrument for the aids of diagnosis. Their medicines compose of herbs, barks, and roots of various plants which are always given as decoction and prescriptions of some coarse minerals are seldom used.

Their numbers at present overrate than the other classes and show figures of at least 20,000 out of 40,000 whole number, but their numbers are decreasing year by year as they either die or retire on account of their old age, as were stated before, and they never have chance to grow up, because the present system of granting licentiate is strict and candidates must pass a hard examination. Those belonging to China-Dutch school are mostly over middle age; they have studied Chinese medicine, but the event of intercourse with Dutch nationality provoked them to study Dutch medicine as well; in those days they could not read Dutch books, and those very few people who could hardly understand them endeavored to translate them into Japanese, by means of that, most of this class possessed an outline of European medicine, but their knowledge is quite stale nowadays, having passed 30 to 35 years.

Their numbers are about 10,000 and their licenses were granted exactly in similar way as that of Chinese class. They treat patients much in similar manner as Chinese school, but often use mixtures, pills or powders which contain one or more drugs, such as opium, calomel, iron, soda, assafœtida, alœs, santonine, etc. Indeed we owe much the progress of European medicine in Japan to encouragement of certain persons in this class.

Moreover certain number of this class followed the progress up to present by their indefatigable energy, and they hold high reputations and respects both in private and public works.

The third class belong to European school (Seiyo-ka); they have undergone a good education either in university, colleges or schools properly instituted under the inspection of the government, their numbers do not exceed more than 5,000 including those who have studied medicine in Europe or America, indeed the reformation of Japanese medicine is the task of them, for this object they join to constitute medical societies and respective society endeavors to publish their journal. The chairs of university, and of colleges are occupied by the members of this class, and the surgeons of Imperial Navy and Army are chosen amongst this class, indeed the important situations both in public and private are entirely held by them. Instead of their honors and reputations they are burdened with a heavy obligation that is for the welfare of future medicine of Japan, to meet these obligations, for instance they started some years ago the Private Sanitary Association of Japan, and carried their works to a great satisfaction both to laymen as well as the professional; moreover the principal leaders in Tokyo caused themselves to start a medical association for the object of which they have to gather all the medical brethren in every province of the Empire and to exchange their knowledges.

The endeavor of them brought this scheme to born in April last under the name of the First Japanese Medical Association, the meeting was held in Tokyo for a week and was closed with every success. It was hoped to hold this association in future once every four years.

The 4th class belong to specialist, viz.: oculist, obstetrician, dentist, bonesetter, vaccinator, etc. Some of them are well educated under the new school, but most of them follow the profession by the tradition and could not be called specialist under the proper sense.

THE RISKS OF KOCH'S TREATMENT.

In the very interesting communication from our Special Commissioner at Berlin reference is made to the dangerous symptoms which may attend the use of injections with Professor Koch's liquid; and although he explains the fatality in some of the fatal cases to be due to the ordinary course of the disease under treatment, there can be little doubt that in a few regrettable instances there has been evidence of disastrous results. The fact is, the profession have been placed in possession of a most powerful poison, and that as yet experience of its effects—which, like all poisons, vary in individuals according to their special idiosyncrasies—is so small as to necessitate the utmost cautious employment of it; this, too, quite apart from cases of pulmonary and laryngeal tubercle, where the local reaction set up by it may of itself produce alarming and dangerous symptoms. Therefore we endorse fully our correspondent's view as to this being an agent (and it is still to be proved that its action is curative) which should not be employed in general practice, but only under circumstances admitting of the strictest continuous medical surveillance. A like conclusion is stated in the excellent report drawn up by Drs. Saundby, Simon, and Barling (*Birmingham Medical Review*, December), who urge the greatest circumspection in dosage and conditions of administration. We believe, for example, that it is rash to commence the treatment of lupus with as much as 0.01 grm., as recommended by Professor Koch, the severity of the local and general reaction being in many cases so extreme.—*Lancet.*

L'UNIVERS MÉDICAL.

A new journal, with the title *L'Univers Médical*, is about to appear in Paris under the editorship of Dr. Séxéno, a pupil of Dr. Apostoli's. It is understood to be an outcome of the Berlin Congress, and will have for its object the promotion of professional solidarity among medical men of all countries, and the furtherance of international coöperation in matters of hygienic reform.

PRACTICAL NOTES.

TRENDELENBERG'S FLEXIBLE DRESSING.

Prof. Trendelenberg has been using at his clinic a gelatin paste, recommended by Unna, that is designed to be substituted in those cases where flexible collodion or india-rubber solutions have formerly been employed. It will hold dressings in place while permitting free motion of the parts. It is not friable nor very stiff, and is not so adherent to the cuticle as to interfere with the excretory functions of the skin. It therefore does not cause the peeling off of the upper layers of the epidermis, upon being removed, and the tendency to eczema in consequence. It is prepared in two degrees of consistence: the thick paste contains gelatin, glycerine and water each thirty parts, with oxide of zinc ten parts. The thin paste has gelatin twenty parts, glycerine thirty, water forty, with oxide of zinc ten parts. Heat is necessary when the pastes are compounded; it is also needed to liquefy them when they are used. The pastes are readily removed with warm water.

ICHTHYOL IN GYNÆCOLOGY.

Ichthyol is strongly recommended by Dr. Freund in the treatment of inflammatory diseases of the female genital organs. Its action is superior to that of all other remedies hitherto in use. Locally, it acts as an antiseptic and analgesic; internally, it improves the general health, increases appetite, improves digestion, and regulates the action of the bowels. Dr. Freund has treated with success cases of chronic parametritis, chronic and sub-acute perimetritis, chronic metritis, salpingitis, erosions of the cervix, cicatrices of the vagina, and prurigo of the external genitals. He prescribes its internal and local use simultaneously.—*L' Union Médicale.*

TREATMENT OF HÆMORRHOIDS BY COLD WATER.

The treatment by very cold water of hæmorrhoids is advocated anew by Dr. Alvin, in *La Semaine Médicale.* His method is the simple one of applying the water to the anal region by means of a sponge, but the method will not succeed unless the sponging is kept up for a number of days. If this is done the growths will diminish in size, and there will be a general relief of the ordinary unpleasant symptoms, such as pain, tenesmus, pruritus and spasm of the sphincter muscle of the anus, when provoked by congested hæmorrhoids. The systematic use of cold water directly after the daily evacuation, and again at bedtime should be the initial treatment. An enema of cold water should be used once or twice daily, if internal hæmorrhoids exist. These internal growths tend early to yield under this treatment unless they have attained to an excessive size, or have been strangulated by reason of frequent inflammations and systematic neglect. The neglected cases will, as a matter of course, require a longer continuance of the water treatment, but the number which in the end will demand surgical interference will be small.

UNCONTROLLABLE VOMITING OF PREGNANCY.

Drs. Henske (*St. Louis Clinique* and *Archives of Gynæcology*, August, 1890) and Gottschalk have found menthol efficacious in stopping the uncontrollable vomiting of pregnancy. Fifteen grains are dissolved in five ounces of distilled water, to which five drachms of rectified spirit are added. A tablespoonful of this mixture is given hourly till the vomiting ceases. The editor of the *Archives of Gynæcology* states that he has had an opportunity of trying the efficacy of this mixture. Vomiting ceased after the fourth tablespoonful. Dr. Gottschalk reports two cases with similar results.—*Brit. Med. Journal.*

DRY CUPPING FOR INFANTILE CONVULSIONS.

Dr. T. J. Heard says: In 19 cases out of 20, infantile spasms or convulsions may be arrested in one minute by the application of one or two dry cups on the back from the seventh cervical to the first dorsal vertebra This will secure a remission, during which emetics, purgatives, or anything else that indications require, may be used.—*N. Y. Med. Times.*

THE ANTISEPTIC PROPERTIES OF CHLOROFORM.

Kirchner, in the *Zeitschrift für Hygiene*, writes that he has found that small quantities of chloroform act destructively and promptly upon the bacilli of cholera and typhoid fever. For this reason he would recommend that, during the epidemic prevalence of these diseases, this drug should be added to drinking water and milk, in the proportion of 1 or 2 per cent. He believes that this precautionary measure will be entirely free from danger as well as inexpensive. The addition of chloroform to lotions, used in surgical practice, would be useful, but more especially in mouth-washes and gargles, for the reason that the buccal cavities, even of healthy persons, often contain pathogenic microörganisms.

EPISTAXIS.

Dr. Jonathan Hutchinson recommends for the treatment of epistaxis the plunging of the feet and hands of the patient into water as hot as can be borne. He declares that the most rebellious cases have never resisted this mode of treatment. —*Boston Medical and Surgical Journal.*

SOCIETY PROCEEDINGS.

The Harlem Medical Association.

Third Regular Meeting, Session 1890–91, held Wednesday, Dec. 3, at 5 W. 125th street, New York.

E. FRIDENBURG, M.D., PRESIDENT, IN THE CHAIR.

DR. E. L. COCKS presented a patient, S., male, 30 years, truck driver, whom he first saw May 11, 1889. Family history negative. Complained of numb feeling over right eye including the temporal and molar regions; also tingling sensations starting just in front of the right ear, running across the nose and including the right half of the upper lip. He did not feel the eyelid on winking nor a piece of cotton passed over the cornea. The eye protruded so that it was on a line with the nasal bone. He first noticed that the right eye was growing larger three months previous to his first visit. Could not close the lid over the right eye. On pressing over this eye backwards and slightly downwards a tumor as large as a hazel nut could be felt. It was immovable and quite hard. Its depth could not be determined. The cornea was clear but anæsthetic. The pupil was fully dilated but did not respond to light. Vision in right eye entirely absent. Left eye $\frac{20}{20}$. The ophthalmoscope showed the veins much enlarged but the arteries smaller. The optic nerve atrophied. He complained of nocturnal headaches. Six months previous to his first visit his hair commenced to fall out and he had sore throat. He denies all knowledge of syphilis, and claims never to have had an eruption of any kind. On examination, inguinal and cervical glands were enlarged and a syphilitic ulcer was found on the leg. The tibia is painful on pressure. No signs of initial lesion. Diagnosis, gumma of orbit pressing on optic nerve and vessels. Mixed treatment instituted, pushing the iodide in hopes of preventing a complete degeneration of the optic nerve. After three weeks of treatment headache better, appetite good, and he now feels the eyelid moving, also the cotton passed over the cornea. The vessels are now normal. The exophthalmia is much less. The tumor is sensibly melting away. By July 1 the eye resumed its normal position. There was a small ulcer of the cornea which disappeared under treatment with hot water and atropine. The sight has not returned. The nerve is in the same condition of atrophy as at the beginning of treatment. The patient does not know the exact period when his sight became lost in the right eye, but states his vision was good before the time when his hair began to fall out. His business did not require accurate vision; if it had he would have made the discovery earlier. Had the patient been placed under proper treatment when the vision first began to fail it might have been restored. But, under the circumstances, the result of treatment is good.

DR. MAYER inquired if there were any evidences of syphilis in the throat; also, if the initial lesion had existed on the lip or tongue?

DR. E. L. COCKS replied there had been mucous patches in the mouth but no evidences of the initial lesion.

DR. R. VAN SANTVOORD stated that this case illustrated the fact, so often noted, that while the growths due to syphilis can be removed by proper treatment, the injury done to the nervous structures by these masses cannot be so easily remedied.

DR. G. H. COCKS thought the destruction of utility of the optic nerve was due to pressure. He spoke of two cases of gumma of the iris coming under his observation which yielded to treatment so far as the gumma was concerned, but the result was that the iris was immovable.

DR. E. FRIDENBERG called attention to the fact that the principle point of interest was that the gumma was located in the orbit as well as its large size. This condition is rare. That the cornea is now clear is a good result. Another interesting point is that the patient was not aware of his loss of vision. Frequently patients have imperfect vision, or perhaps no vision in one eye and are made aware of it only by some accident. A case came under his notice recently where the patient had been assaulted and the eye injured. He came to New York for expert examination before beginning a suit for damages for loss of sight. Examination proved that the lens was dislocated and there were other signs of long-standing lesions, certainly antedating the injury.

DR. C. B. MEDING suggested the possibility of a specific local neuritis independent of the pressure caused by the gumma. He believed it possible for the nerve to recover after the pressure, as all nerves are possessed of great vitality.

DR. E. L. COCKS thought it strange that one particular nerve should become the seat of neuritis while the other nerves of the orbit escaped.

DR. FRIDENBERG said the suggestion of Dr. Meding had engaged the attention of oculists, because it was well known that neuritis was often the result of small tumors in the brain. However, he did not think the case under consideration required that explanation.

DR. W. F. MARTIN presented photographs illustrating the following case: A boy, æt. 16, first came under treatment in June, 1890, suffering from alopecia areata over a considerable space. Galvanism was employed three times a week for six weeks with no improvement. Small fly blisters were then employed, three at a time,

to remove the epidermis. The electrodes were now dipped into a bichlor. sol. 1-3,000, and galvanism employed. From time to time the position of the blisters was changed, but were kept near the denuded area. After ten days a very fine growth of hair began to appear, but only where the blisters had been situated. This growth gradually became more marked and abundant. In three months the case was entirely cured. It is remarkable that in ordinary cases the hair begins to grow from the periphery, but in this case it began in the centre, which was probably due to the treatment.

DR. E. L. COCKS had seen a case in Dr. Buckley's clinic which had existed five months. The patient went to bed suffering from a headache, and, on rising in the morning found two bald spots on the scalp which were also anæsthetic. Carbolic washes had been used and the hair had appeared on one spot but not on the other.

DR. MEDING called attention to the fact that one theory of the cause of alopecia was that it was due to the accumulation of dandruff. It was commonly known that solutions of the bichloride of mercury were useful in this condition. Perhaps the solution had more to do with the cure of Dr. Martin's case than the galvanism.

DR. KNICKERBOCKER inquired of Dr. Martin how he explained the fact that the hair came back over the whole surface, whereas the bichloride solution had only been applied to limited areas?

DR. MARTIN had no explanation to offer, he only knew that the hair commenced to grow only on the surfaces denuded by the blisters and then gradually spread.

DR. G. H. COCKS presented to the Association a patient 26 years old, a fireman on the elevated railroad. On November 15 last, while at his work, he noticed a very peculiar numb feeling extending over the entire left side of his body. This feeling lasted only a very few minutes. One week later, while working on his engine, he felt a severe pain his left eye, as if a coal or spark had entered it. The muscles of the jaw became contracted and he fell forward unconscious on the boiler, receiving superficial burns on the wrists of both hands. The engineer did not notice any convulsions or frothing of the mouth. He was unconscious about half an hour. The important question is as to diagnosis, and, if these attacks are likely to recur. He is in line of promotion, but does not feel disposed to become an engineer if these attacks are to be repeated.

DR. VAN SANTVOORD was inclined to consider the case one of epilepsy having the usual aura and loss of consciousness. There may have been convulsive movements present although these were not recognized at the time.

DR. MAYER was inclined to leave the diagnosis open to see if there is a return af the attacks. In the meantime he did not consider it proper for the patient to assume a perilous position.

DR. MALLESON inquired if the urine had been examined?

DR. COCKS replied that he regretted that he had not examined it. He had carefully examined the heart and found that normal.

DR. VAN SANTVOORD had a case of convulsions occurring in a woman suffering from albuminuria of pregnancy. The albumen was not found just before or after the attack. It appeared some twenty-four hours after the convulsive attack.

DR. FRIDENBERG believed it impossible to make a positive diagnosis in the case under consideration at the present time. We must wait until the case develops. It is possible for an attack of this character to be due to some peripheral irritation. He related the instance of his brother, a young man 23 years old, who had two attacks of loss of consciousness with some convulsive movements lasting a few minutes. Vomiting followed. These seizures were due to the eruption of a wisdom tooth.

FOREIGN CORRESPONDENCE.

LETTER FROM LONDON.

(FROM OUR OWN CORRESPONDENT.)

Sulphichthyolic Acid and its Preparations in the Treatment of Inflammatory Diseases of Women—The Leprosy Commission in India—Spasmodic Dysmenorrhœa—Disinfection af Infected Premises—Miscellaneous Gleanings.

When ichthyol was first introduced into therapy it made a very considerable reputation, and was found by experiment to have a contractile influence upon the vascular system so that hyperæmia, inflammation and pain in any situation were relieved by its application. The disorders caused by or associated with dilation of the vascular system or anomalies of the circulation being so numerous, the remedy ran some risk of being regarded as put forward as a panacea. This was even more the case when the substance began to be used internally against organic affections or disordered functions, which could be regarded as due to or intimately connected with a dilated vascular condition. Quite a new direction for the display of the peculiar properties of sulphichthyolic acid and its preparations have been tried and it is now employed internally, not only in various skin affections, but also in the inflammatory diseases of women. Against these latter it is found to be generally more effective than any remedies previously in use. The results are found to be extraordinarily satisfactory as far as pain soothing and dispersing properties go. As regards methods of applica-

tion, that generally found sufficient externally was a 10 per cent. solution in glycerine, sometimes suppositories or ointment of ichthyol is also used. Internally the remedy is given in pills. Out of one hundred recent cases, thirty-four were completely cured, thirty-nine were considerably improved, and fifteen underwent a more or less pronounced change for the better. In only twelve out of the whole number was ichthyol without success. The remedy has been found to be convenient in application and favorable in action.

The members of the Leprosy Commission, consisting of Dr. G. A. Buckmaster, Radcliff Fellow of Magdalen College, Oxford, Dr. A. Kanthank, of St. Bartholomews Hospital, and Dr. B. N. Rake, Government Medical Officer of the Leper Asylum, Trinidad, have arrived in Bombay and will at once commence their work. The interest awakened in India by this commission is likely to extend to every place in the British possessions where this malady exists. The final report is to be subjected to a severe scientific analysis. The commission has been welcomed in India with every demonstration of approval and sympathy.

Dr. Champneys, in his lecture on Painful Menstruation, delivered before the Harveian Society, considered spasmodic dysmenorrhœa to be the only real dysmenorrhœa. The mechanical causes of the complaint he summarized under the heads of the theory of flexion, stenosis, and chronic congestion produced by flexion, but he thought this theory was inadequate. With regard to the question as to whether flexions were essentially associated with dysmenorrhœa, a large number of examinations made by observers in virgins, multiparæ and mothers, showed conclusively that anteflexion was not the usual cause of spasmodic dysmenorrhœa. As to treatment, he thought that division of the os led to an alleviation of the pain by setting at rest the irritated uterine fibres. Pregnancy, followed by parturition, appeared to be the physiological remedy. Hygienic measures, with plenty of Epsom salts, was the best prophylactic treatment. Division of the external os was always useless in such cases, but incision of the internal os, although it was a highly dangerous proceeding, was sometimes attended with good results, as was also dilatation of the cervix, when this operation was performed midway between the menstrual periods.

Among the most useful provisions of the Infectious Diseases (Prevention) Act of last session, are those relating to disinfection of infected premises. Hitherto the officers of sanitary bodies have been hampered in their endeavors to check the spread of infectious sickness among the poorer sections of the community by reason of the difficulties attending the adequate disinfection of living-rooms, it may be already over-crowded. But power is now placed in the hands of all local sanitary bodies who choose to use it, of providing members of a family in which infectious disease has appeared, with temporary shelter or house accommodation, when they have been compelled to leave their dwelling for purposes of disinfection by the sanitary authority. Up to now such expenditure has not been a legal charge upon the district.

The refusal to admit women to medical examinations at Oxford gives just now somewhat increased interest to the signal success which the students of the London School of Medicine for Women have attained at the recent examination at the University of London. There were nine female candidates for the M.B. degree, and all have passed—five in the first and four in the second division; of the sixty male candidates fifty-two were successful. Among the medical schools University College and Guy's Hospital take the first place, each having eleven successful candidates. Next come St. Bartholomew's with ten, the London Hospital with seven, and King's College with six successful candidates. The total number of M.B. degrees granted by the London University this year is eighty, the largest number yet attained. Last year the number was sixty-four. The increase has been made notwithstanding complaints from some of the medical schools with respect to the severity of the requirements of the University. It is stated that the scheme of reconstitution, of which the Senate has resumed the consideration, does not progress very favorably, and gives no great promise of a satisfactory issue.

Mr. Lennox Browne has had under his charge a curious case, which must have troubled various physicians and surgeons. A middle-aged female patient was sent to him from the Provinces, and from her debilitated condition the supposition was that her malady was either phthisis or laryngeal cancer. The woman was tall and large boned, yet her weight was only 90 pounds. Mr. Browne ascertained that the real cause of her emaciation was the lodgement of a plate of artificial teeth, which had become firmly imbedded in the larynx, and had there remained twenty-two months. The patient remembered that one night she had been seized with a violent fit of coughing, and that her artificial teeth disappeared somehow during the paroxysms. Difficulty of breathing and pain in swallowing resulted from that very day. The obstacle having been dislodged, the patient has speedily recovered.

At the first meeting of the committee on hypnotism the following headings were decided upon as a basis for carrying out investigations: 1. The Nature of Hypnotism and its Nervous and Mental Relations. 2. Its General or Limited Applicability as a Therapeutic Agent in different classes of disease. 3. The Degree and Mode of

its Influence on Morbid Conditions. 4. Its Dangers and the Necessary Safeguards. Dr. Needham, the President of the Section of Psychology at the annual meeting of the Association in Birmingham, was unanimously elected Chairman of the Committee.

At one of the London Hospitals antiseptic sponges are prepared by plunging thoroughly clean and bleached sponges in a liquid composed of carbolic acid 10 grams, alcohol at 90° 20 grams, distilled water 100 grams, and essence of lavender 30 drops. After being left in this liquid for a few days they are washed with distilled water, which carries off the excess of carbolic acid. Very great antiseptic powers are claimed for the essence of lavender, which is not added merely for its agreeable odor.

Dr. Thorne Thorne will deliver the Milroy Lectures on Public Health at the Royal College of Physicians on February 17, 19, 24, and 26. The subject selected being Diphtheria, its Natural History and Prevention. G. O. M.

DOMESTIC CORRESPONDENCE.

LETTER FROM NEW YORK.

(FROM OUR OWN CORRESPONDENT.)

New York Physicians and the Koch Lymph—Dr. J. H. Tyndale and the Treatment of Tuberculosis by Inoculation—Statistics of Phthisis and Pneumonia—Dr. Oliver Wendell Holmes on Academies—The State Commissian on Lunacy—A History of Legislation for the Insane in the State of New York—Public Baths for Winter Use—Miscellaneous Gleanings.

During the past month quite a number of New York physicians, the most of them acting as representatives of medical schools and hospitals, have gone to Berlin to made a personal study of the inoculation method of Koch. The first consignments here of "lymph" from Germany were received about the same time at the Hospital for Ruptured and Crippled, St. Luke's Hospital and Mount Sinai Hospital, and the physicians of these institutions have been assiduously experimenting with it upon appropriate cases. At the first-named hospital the patients treated have been principally children suffering from spinal caries, hip-joint disease, and other similar affections.

In connection with the subject of the treatment of tuberculosis by inoculation, it may be of interest to mention that at the November meeting of the New York County Medical Association, Dr. J. H. Boldt called attention to the work in this direction which has been accomplished by one of the members of the Association, Dr. J. Hilgard Tyndale. For a number of years, he said, Dr. Tyndale has been pursuing experimental investigations in the same line as Koch, and during the past year and a half he has met with excellent results from the inoculation of tuberculous patients with bovine virus diluted in a saline solution. Among the results noted have been the following: Cough diminished very rapidly, hectic disappeared, the bacilli decreased in the sputa, the weight increased and the general health improved. As in the case of Koch's inoculations, the constitutional symptoms immediately resulting from inoculation were quite severe. It is expected that Dr. Tyndale will present a detailed account of his experiments and their results to the Association at an early day.

In view of the special interest now attaching to the matter of consumption, Dr. John T. Nagle, of the Bureau of Vital Statistics of the Health Department, has prepared a table which shows the number of deaths from phthisis and from pneumonia occurring in this city during the last ten years; the deaths from both causes being given for the reason that cases of phthisis sometimes terminate in pneumonia, and many cases of pneumonia are of a chronic character, although this is not always stated in the death certificates. This table is as follows:

	Deaths from Phthisis.	Deaths from Pneumonia.	Deaths from all Causes.
1880	4,706	2,822	31,937
1881	5,312	3,261	38,624
1882	5,247	3,472	37,924
1883	5,290	3,409	34,011
1884	5,235	3,159	35,034
1885	5,196	3,649	35,682
1886	5,477	3,657	37,351
1887	5,260	3,707	38,933
1888	5,260	4,288	40,175
1889	5,179	4,075	39,697
Total	52,162	35,499	369,350

The table shows that the percentage of the deaths from phthisis to the total deaths in the city in these ten years was 14.12.

There can be no question that the most attractive feature of the ceremonies recently held at the formal opening of the new building of the Academy, was the reading of the characteristic and noble letter sent by Dr. Oliver Wendell Holmes, of Boston, who was unable to be present in person on this occasion. It was, in part, as follows: "Academies have been too often thought of as places of honorable retirement and dignified ease—roosts where emeritus professors and effete men of letters, once cocks of the walk, could sit in quiet rows, while the fighting, the clucking and the crowing were going on beneath them. . . . . But the academy which fulfils its true functions is a working body. It deals with living subjects; it handles unsettled questions; it sets tasks for its members and furnishes, so far as it can, the appliances for their prosecution; it offers rewards for meritorious performances and sits in judgment on the efforts of aspirants for distinction. It fur-

nishes the nearest approach we can expect to a fixed standard of excellence by which the work of new hands and the new work of old hands can be judged. It is a barrier, a breakwater, against the rush of false pretensions which are constantly attempting to find their way into public confidence.

"Nowhere is such a defense more needed than in the sciences and arts which deal with the health of the community. The public is so ready, so eager to be deceived, and the traders in deception are so willing, so hungry to deceive those who will listen to them, that it needs a solid wall of resistance, a close, united phalanx of men of recognized sense, knowledge and character to stand against them. The various forms of what I will venture to christen as pseudo-pathy and pseudo-therapy—though they are known to the public by other names—can never loosen the intelligent, thoroughbred physician, or the enlightened members of society, so long as the best heads of the profession are banded together in a noble institution like this Academy. We look to this great and able body of men to guard the sacred avenues to the temple of science against all worshipers of idols. The medical profession will always have to fight against the claims of wrong-headed and too often dishonest individuals, and 'schools,' as they call themselves. A portion of every community will always run after the false prophets. There are a certain number of squinting brains, as there are of squinting eyes, among every thousand of our population. There will always be a corresponding number of persons calling themselves physicians ready to make a living out of them. Long may it be before the wholesome barriers are weakened that separate the thoroughbred and truly scientific practitioner from the plausible pretender with his pseudo-pathy and his pseudo-therapy."

It would certainly seem to be well that some of our New Code friends among the officials as well as Fellows of the Academy, who have done all in their power to break down these "wholesome barriers," should ponder deeply these wise counsels of the genial and venerable Autocrat.

The State Commission in Lunacy has adopted two orders which it is believed will be of considerable benefit to the welfare of the patients in the State hospitals for the insane. The first provides that each insane patient shall be permitted to write to some friend or relative at least every two weeks, and, in the case of patients unable for any reason to write, the medical superintendent of the hospital must direct some proper person to write for such patients at suitable intervals, if they so desire. All letters of insane patients which are detained must be forwarded to the Commission, accompanied by a statement of the reasons for such detention; and all letters addressed to State officers, judges of courts of record, and district attorneys, must be immediately forwarded without examination.

The second order states that, in view of a custom which has long prevailed of permitting patients to temporarily leave institutions for the insane to visit friends, or to go out "on trial" for an indefinite period, and it also having been made to appear that due diligence has not always been exercised to ascertain the whereabouts of insane patients who have escaped, and to promptly secure their return, and as in cases where long intervals elapse between the date of parole or escape and the return of patients to an institution, the possibility may arise of their being reconfined when not insane by reason of their recovery during such interval, it is ordered that no insane patient, while in the custody of an institution, be permitted to go upon parole who, in the judgment of the medical superintendent, is dangerous, either to himself or others; that no parole be granted for a longer period than thirty days; that upon the escape of a patient prompt and vigorous measures be taken to secure his return; that a patient who has been paroled or who has escaped, if not returned to the institution by the thirtieth day thereafter, must be discharged from the books of the institution upon that day, and a notice of such discharge must be forwarded to the Commission; and that such patient must not be readmitted except upon a new medical certificate of lunacy, the cost of which (except in the case of a private institution, by special agreement), must be borne by the institution.

In view of efforts which are now being made by certain interested parties to bring to bear such influence upon the State Legislature as will render null and void, as far as possible, the beneficent provisions of the act establishing State care for the insane poor passed at its last session, an able writer in Utica has prepared an interesting history of legislation for the insane in this State, and the opposition which the friends of reform have had to encounter during the last quarter of a century. From this it appears that twenty-five years ago the Legislature passed an act little less than revolutionary as far as the preconceived ideas of many were concerned, which had for its object the freeing of the insane poor from the thralldom of the brutal and ignorant keepers of the county almshouses. The passage of this act was the culmination of a fierce struggle between the friends of humanity and intelligence on the one side, and those of ignorance, viciousness and cupidity on the other.

It is worthy of note, however, that the measure was opposed by one man of great eminence as an alienist, who for many years was Superintendent of the State Asylum at Utica, and who received the high honor of being made the second President of the New York State Medical Association, the late Dr. John P. Gray. He did so not because he was hostile to a higher ideal of treatment for the insane poor, but because he contended that

the act was based upon a wrong theory, for the reason that it confirmed a policy of the State which he regarded as highly detrimental, namely: that which declared that after a certain length of time or under certain circumstances insanity was incurable, and provided that the insane poor, after a short period of treatment—usually less than two years—might be sent to the asylum proposed to be established under the act and cared for as "chronic insane." Dr. Gray did not live along to see the Legislature of the State come to his way of thinking; but it is gratifying to those who hold his memory dear that this brilliant, accomplished and humane man was nearly twenty-five years in advance of his contemporaries on a question involving such profound human sympathies.

This act provided for the establishment of a State Asylum for the Chronic Insane, and that all of the so called chronic insane in the poorhouses at that time should be transferred to it as soon as the buildings were completed; but the men who profited by the care of these individuals soon showed that they were not to be so easily deprived of their spoils. With great cunning they changed their tactics, and under the guise of patriotism and unselfish desire to relieve the taxpayer, they defeated from year to year the passage of appropriations for the enlargement of the Willard Asylum for Chronic Insane. After a few years of such tactics they came before the Legislature with statements like the following: "Now, you see that this asylum will not be enlarged rapidly enough to accommodate all the insane as fast as they ought to be provided for. We propose that you give these county people another chance. They mean well. These insane poor live in their midst, and they are tenderly attached to them. They desire that their friends shall have the opportunity of frequently visiting them, and it is wicked to remove them farther from their homes. Now, why not provide a scheme whereby certain of the 'good' counties can be exempted from the operation of this statute so long as they care for these poor people properly? You can at least try them, and if you find that they are not honorably living up to their promises, then the exemptions can be revoked. This plan will relieve the State and at the same time will satisfy the counties."

This sophistry prevailed, and the proposed plan was carried out. Much that had been gained was lost. The principle ostensibly contended for was practically abrogated, and the old abuses of the system of county care were rapidly revived. The exemptions continued to be granted until twenty counties were relieved from the necessity of sending their chronic insane to the Willard State Asylum; and for many years the evils attendant upon the confinement of insane patients in local poorhouses, with utterly inadequate medical care, continued unabated. About four years ago, however, the State Charities Aid Society turned its attention to the condition of the insane in the county almshouses and in the so-called county asylums of the State, and the result of its investigations was to instigate prompt measures for the remedying of this great abuse once more. With this end in view legislative action was sought, and the heroic efforts of this philanthropic organization, backed by the press and by numerous medical societies, as well as the great mass of the medical profession, are now well known. Each winter up to 1890 these efforts were defeated by a most vicious combination of meanness, greed and petty politics; but in 1889 the Society came nearly to the point of success, its bill providing for State care of the insane poor being defeated by only a few votes.

At this juncture another potent factor was brought forward, namely; the State Commission in Lunacy, a central board endowed with ample powers, which was created in 1889, after a ten years' struggle in the Legislature by the advocates of such a commission. The first report of the Commission, with Dr. Carlos F. MacDonald, a physician with twenty years' asylum experience, at its head, fully confirmed all that the State Charities Aid Society had previously reported in regard to the disgraceful condition of the insane poor in the various county institutions; and it was no doubt largely due to this that the act now in force was passed last winter. This act, it will be remembered, provides for the care in State Hospitals of all the insane poor, including both acute and chronic cases, in the State, with the exception of New York, Kings and Monroe Counties. For the first time in the history of the State it is legally recognized that the insane are wards of the State; and the act also recognizes the principle that insanity is a disease, and as such is amenable to treatment like other diseases.

As in 1865, so in 1890, the friends of the county poorhouses and asylums, with a brazen effrontery, are at work to undo as far as possible the good that has been accomplished; but they are not very consistent in their talk. They insist that they want to do nothing more than care for what they are pleased to term the chronic or incurable insane, and yet in the same breath they state—an assertion not very creditable to their vaunted intelligence—that they cure more of these in their local institutions, and, it must be remembered, without any appliances or any medical skill worthy the name, than the State hospitals provided with all the most approved modern facilities for the treatment of the insane. Their plan of campaign is being rapidly arranged. Thus, the Board of Supervisors of one of the counties in the central part of the State at a recent session issued a circular calling upon the similar boards of other counties to aid them in the movement, and to ask for the repeal, and failing in that, the modification of the new law

establishing State care for the insane poor. By the term modification it is not clearly shown what is meant, but it is intimated that the old tactics of 1865 are to be again employed, and that an effort is to be made to exempt certain of the "good" counties from the operation of the statute, and, if this should fail, to defeat all appropriations for carrying out its provisions. It is a fact that the county authorities, now that this act has been passed, decline to take any steps whatever towards bettering the condition of the insane poor still remaining under their charge. Now they propose to prevent the appropriation of money for their removal, and if they are successful the result can only be that the condition of these people, bad as it is now, will grow worse.

A curious feature of this movement is that the whole contention is over only about one-fourth of the insane poor of the counties of the State exclusive of New York, Kings and Monroe Counties. In the other fifty-seven counties, there are, according to the report of the Commission in Lunacy, considerably less than eight thousand people of this class. Over five thousand of these patients are now provided for in the State hospitals, so that the effort is directed to preventing less than one-fourth receiving the same care and treatment as the other three-fourths; the ostensible pretext for this being that the one-fourth are incurable insane, have been declared so by statute, by lapse of time, and by the opinions of the superintendents! By the 1st of October, 1891, with the appropriations which have already been made by the legislature, it is estimated that the number of insane poor still left unprovided for in the State hospitals will not exceed 1,200.

The subject of public baths, for winter as well as summer use, is just now receiving considerable attention, especially in view of the fact that many of the city's free summer baths along the Hudson and East Rivers are adjacent to the mouths of sewers and in consequence endanger, to a greater or less extent, the health of the bathers. At a recent meeting of the Section on Hygiene, Public Health and State Medicine, of the New York Academy of Medicine, Dr. Simon Baruch, who has given much attention the subject, read a paper entitled "A Study of the Public Baths, together with an Inexpensive Method for their Hygienic Utilization," and in it he proposed a plan for the establishment of public shower baths, such as are now in use in Berlin and Vienna. Acting on the suggestions of Dr. Baruch, the Society for Improving the Condition of the Poor have determined to erect on a site in the midst of a down-town crowded tenement district which has been offered them by the City Mission and Tract Society, a two-story building, 27x61 feet, in which it is proposed to have a reading-room with an open fire-place and twenty-four large apartments for bathers. Only shower or spray baths will be provided, these being believed to be the most efficient for the preservation of health; and each apartment is to have a subdivision to be used as a dressing room. Tickets entitling the holder to a bath and the use of soap and towels, will be sold for five cents to those able to pay for them, and given free to others, and hot coffee will be given to those who desire it on leaving the bath during the winter months. It is estimated that one thousand persons can bathe each day, and on three days of the week the building will be reserved exclusively for females.

Football has never been so strongly and so brilliantly played in this country as in the great games between Harvard and Yale, and Yale and Princeton during the past month; and, better than this, these games have satisfactorily proved that football can be a gentlemanly game and not the brutal exhibition of prize-ring methods that have so often disgraced it in the past. It is well that the game has achieved that character with the general technical improvement that is manifested in the way in which it is played; and, in fact, football has now taken a place in the front ranks of athletic sports, both as regards the character of the young men who engage in it, the perfection of skill displayed in the playing, and the popular interest manifested in it.

The women of New York are determined not to let their London sisters surpass them in zeal for the support of the hospitals, and while they may perhaps never adopt the plan of street collections so popular in that city, where even ladies of the highest social position do no think it beneath their dignity to charge themselves with the care of a sidewalk collection stand on "Hospital Day," they have this year organized a Women's Auxiliary of the Hospital Saturday and Sunday Association by means of which they hope to materially increase the amount of the annual public collection for the hospitals. Their special object is to carry out the work of the charity more thoroughly than ever before in all branches of the retail trade, and for this purpose eighteen different committees of ladies have been appointed.

A young man recently arrested here on the charge of theft adopted a very clever ruse for making his escape. On arriving at the station house he stated that he had taken a large dose of laudunum, and under the circumstances an ambulance call was sent out. The ambulance surgeon, on his arrival, thought it would be advisable to make use of the stomach-pump, and on asking for some hot water, the two officers in charge of the prisoner left him to get it from the stove. No sooner were their backs turned, however, than the agile prisoner dashed out through

the back door, which chanced to be open, and before the astonished officers had recovered their senses he had climbed over the wall of the yard and made good his escape. P. B. P.

SPECIAL CORRESPONDENCE.

Shall The Journal be Removed to Washington?

To the Editor:—Anent the question of removing THE JOURNAL, I would vote for its going to Louisville, Ky., because of its *central* location; this would assure the best attendance at meetings of the Association I think. W. C. DORSET.

Columbia, Tenn., January 5, 1891.

ASSOCIATION NEWS.

PERMANENT MEMBERS.—From the list of Permanent Members of the Association published in THE JOURNAL for December 27, 1890, the following names were unintentionally omitted:

Cannaday, C. G., Roanoke City, Va., 1890.
Duffield, George, Detroit, Mich., ——
Way, Eugene, Dennisville, N. J., 1889.
Woodruff, L., Alton, O., 1883.

In revising and copying so many names by the Secretary and Treasurer, there may have occurred other omissions; if so, we will supply the defect by publishing all additional names to which our attention may be called.

MISCELLANY.

LETTERS RECEIVED.

Dr. Joseph Smith, San Jose, Cal.; Dr. Paul Paquin, Columbia, Mo.; Damrell & Upham, Doliber-Goodale Co., Codman & Shurtleff, S. R. Niles, Boston, Mass.; Dr. C. D. Watson, Ontario, Cal.; Dr. W. A. Scott, Swanton, O.; Roberts and Allison, Indianapolis, Ind.; Dr. F. E. Udell, Katharmon Chemical Co., St. Louis, Mo.; Mutual Library Co., Bellevue Hospital Medical College, C. L. Topliff, Thos. Leeming & Co., Jas. F. Madden, J. H. Bates, G. E. Stechert, New York City; Dr. D. S. Lamb, Dr. C. R. Greenleaf, Dr. Irving C. Rosse, Washington, D. C.; Dr. Wm. B. Atkinson, University of Pennsylvania Press, P. Blakiston, Son & Co., Dr. Richard J. Dunglison, Phila., Pa.; Parke, Davis & Co., Detroit, Mich.; Dr. W. B. Canfield, Baltimore, Md.; Plimpton Mfg. Co., Hartford, Conn.; Dr. C. H. Hunt, Stanwood, Ia.; Dr. J. H. Kellogg, Battle Creek, Mich.; Dr. G. L. Knapp, Mt. Vernon, Mo.; Dr. G. O. Ward, Worcester, Mass.; Dr. W. W. Pierce, Waukegan, Ill.; Bank of Washburn, Dr. R. L. Nourse, Washburn, Wis.; Dr. L. L. Leeds, Lincoln, Neb.; Subscription News Co., National Mailing Co., W. F. Keener, Dr. W. F. Coleman, Publishers' Commercial Union, Dr. John Davis Hartley, Dr. H. Wardner, Chicago; Dr. F. D. Haldeman, Ord, Neb.; Dr. W. A. Reed, Necedah, Wis.; Dr. J. P. Stoddard, Muskegon, Mich.; Dr. G. Owen Mead, Newmarket, Eng.; Cincinnati Hospital Library, Cincinnati, O.; Dr. Ashley Thompson, Oshkosh, Wis.; Dr. Jno. M. Foster, Richmond. Ky.; Dr. S. J. Bridenstine, Weston, Ore.; Dr. John Langon Sullivan, Malden, Mass.; Dr. Leslie W. Weedon, Tampa, Fla.; A. C. Davis, Ann Arbor, Mich.; Dr. T. Wertz, Evansville, Ind.; Dr. Wm. M. Kaull, Watertown, Ia.; Dr. E. J. Buck, Platteville, Wis.; Dr. Henry B. Baker, Lansing, Mich.; Dr. J. R. Hinkle, Sullivan, Ind.; Dr. Alfred Mercer, Syracuse, N. Y.; Dr. Geo. Dock, Galveston, Tex.; Dr. Robert Levy, Denver, Col.; Dr. Chas. Gardiner, Emporia, Kan.; Dr. H. B. Hemenway, Evanston, Ill.; Dr. E. C. Kinney, Norwich, Conn.; Dr. S. N. Hamilton, Connersville, Ind.; Dr. L. Woodruff, Alton, O.; Dr. G. G. Guenther, Ottawa, Ill.; Dr. Ashley Thompson, Oshkosh, Wis.; Dr. J. Simonson, Pittsville, Wis.; J. Astier, Paris, France; Dr. H. Orlady, Durand, Wis.; Dr. J. A. Webb, Providence, R. I.; Dr. C. G. Cannaday, Roanoke City, Va.; J. E. Heaton, New Haven, Conn.; Dr. Z. Rouleau, Manteno, Ill.; Dr. Eugene Way, Dennisville, N. J.; Ontario Med. Library Ass'n, Ontario, Can., Dr. L. C. Moore, Buffalo, Ia.; Dr. M. E. Cunningham, Garnett, Kan.; Dr. C. Bryan, Prestonburg, Ky.; Ross, Daniels & Co., Buffalo, N. Y.; Dr. R. F. Harrell, Mt. Lebanon, La.; Dr. Wm. B. Canfield, Baltimore, Md., National and Surgical Institute, Atlanta, Ga.; Wm. J. Haddock, Dr. C. M. Hobby, Iowa City, Ia.; Moore's Subscription Agency, Brockport, N. Y.; Dr. Geo. R. Wells, Livingston, Mont.; Dr. Robert McCorkle, Ponchatoula, La.; Dr. T. A. McGraw, Detroit, Mich.; Dr. J. B. Mattison, Brooklyn, N. Y.; Dr. Chas. McLean, Griswold, Ia.; Dr. W. B. Henderson, Pittsburgh, Pa.; Dr. W. M. Sprigg, Washington; Dr. H. Gradle, Dr. W. F. Coleman, Subscription News Co., Dr. J. A. Robison, Dr. F. C. E. Mattison, Chicago; J. F. Madden, Dr. A. H. Leary, Frank, Kiernan & Co., E. Steiger & Co., A. L. Chatterton & Co., Dr. A. H. Goelet, W. H. Schieffelin & Co., J. A. Hill & Co., Meyrowitz Bros., T. C. Morgan & Co.

Official List of Changes in the Stations and Duties of Officers Serving in the Medical Department, U. S. Army, from December 27, 1890, to January 2, 1891.

Capt. William J. Wakeman, Asst. Surgeon, is relieved from the further operation of par. 13, S. O. 254, A. G. O., October 30, 1890, and telegraphic instructions of the 16th inst., from this office, transferring him from Ft. Bidwell, Cal., to Ft. Huachuca, Ariz. Ter., and he will return from Reno, Nevada, to Ft. Bidwell, for further duty at the latter post. By direction of the Secretary of War. Par. 3, S. O. 300, A. G. O., December 24, 1890.

First Lieut. Ogden Rafferty, Asst. Surgeon, is relieved from duty at Ft. Sam Houston, Tex., and will report in person to the com'dg officer, Camp Eagle Pass, Tex., for duty at that station, reporting by letter to the commanding General, Dept. of Texas. By direction of the Secretary of War. Par. 2, S. O. 301, A. G. O., December 26, 1890.

Major Stevens G. Cowdrey, Surgeon, extension of leave of absence on account of sickness granted in S. O. 293, December 16, 1890, from this office, is still further extended one month on account of sickness. By direction of the Secretary of War. Par. 8, S. O. 302, A. G. O., Washington, December 27, 1890.

Major John S. Lauderdale, Surgeon, now on duty at Ft. Ontario, N. Y., will proceed to Pine Ridge Agency, S. Dak., without delay, and report in person to Brig. Gen. John Brooke, for duty in the field, and by letter to the commanding General, Dept. of Dakota. By direction of the Secretary of War. Par. 8, S. O. 303, A. G. O., Washington, December 29, 1890.

Official List of Changes in the Medical Corps of the U. S. Navy for the Week Ending January 3, 1891.

Asst. Surgeon G. McC. Pickrell, detached from U. S. R. S. "Minnesota" and wait orders.

Asst. Surgeon A. M. D. McCormick, ordered to the U. S. R. S. "Minnesota" as Dr. Pickrell's relief.